

Children's Peer Relations and Theory of Mind (ToM) Abilities: Role of Empathy, Self-  
Concept and Coping Style During Middle Childhood

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## **Abstract**

Theory of Mind (ToM) is the ability to attribute mental states, such as beliefs and desires, of oneself and others, and plays an important role in our everyday social behaviour (Astington, 1993, Wellman, 1990). Past research suggests that children's perceptions of their peer relations, such as being accepted or rejected by fellow peers have significant associations with ToM abilities (Slaughter, Dennis, & Pritchard, 2002; Slaughter, Imuta, Peterson, & Henry, 2015). To date, few studies have explored how ToM affects children's perceptions of peer relations (peer acceptance and rejection) during middle childhood (ages of 8-13 years). To address this gap in research, the current study investigated Canadian children's (70, g=39, b=31, 9-12 years old) perceptions of peer relations and ToM abilities. Results focused on individual differences and correlations among children's peer perceptions, self-perceptions, coping skills, and ToM abilities. Educational implications of the present findings will be discussed.

## **Keyword**

Theory of mind, peer relations, middle childhood, coping skills, empathy

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## CHAPTER ONE: INTRODUCTION

Understanding the role of peer acceptance and peer rejection (i.e., peer relationship) in the social and emotional development of children and adolescents has been a growing concern for parents, educators, and researchers. Peer relationships formed during childhood and adolescence have a lasting effect on a child's attitude and behaviour (Bagwell, Coie, Terry, & Lochman, 2000; Bagwell & Schmidt, 2013). Research has shown peer relationship formed in schools to have an impact on academic motivation, self-perceptions, social and emotional well-being, bullying, peer victimization, and long-term consequences such as school dropout, mental illness, and behavioral problems (Boivin & Hymel, 1997; Dijkstra, Lindenberg, & Veenstra, 2007; Gazelle & Druhen, 2009; Georgiou & Stavrinos, 2008; Mercer & DeRosier, 2008; Nesdale & Lambert, 2007; Oberle, Schonert-Reichl, & Thomson, 2010; Trentacosta & Shaw, 2009).

In recent years, researchers have been interested in looking at predictors of peer relationship in schools such as being more empathetic and optimistic (Oberle et al., 2010). Asher and McDonald (2009) found that individual differences, such as being kind, cooperative, friendly, and helpful, are more common in children who are liked by their peers (peer accepted) whereas children who are rejected by their peers (peer rejected) show heightened levels of aggression and submissive behaviors (Asher & McDonald, 2009). Additionally, Flanagan, Erath, & Bierman (2008) found social anxiety to be a positive predictor of peer victimization and negative predictor of peer acceptance (Flanagan et al., 2008).

One factor that has received attention is Theory of Mind (ToM) abilities and the

role of advanced ToM ability in relation to individual children's social experiences and peer relationship in schools (Hughes et al., 2005, Slaughter, Dennis & Pritchard, 2002). Premack and Woodruff first introduced the concept of ToM in 1978, defining it as the ability to attribute mental states such as beliefs, intents, desire to oneself and others, and understand that others have beliefs and intentions that are different from ours (Doherty, 2008). Using this knowledge, one can predict and explain the actions and behaviors of others. Studies have shown that ToM plays an important role in effective conversation in adults (Krych-Appelbauma et al., 2007). It can also help predict people's present and future behaviour, moral decisions (Lagattuta, 2005, 2008), decision making and future goal setting (Lagattuta, 2008).

It is important to study ToM in children as it allows us to understand development of ToM abilities and find out about its functions (Baron-Cohen, Leslie, & Frith, 1986, Bosacki & Astington, 1999, Slaughter, Imuta, Peterson & Henry, 2015). Researchers have also studied young children who lack ToM abilities to find out more about the role of ToM in everyday life (Baron-Cohen, 1995). Lastly, children have been used to study ToM as they undergo behavioural and physical changes as they go through the different stages of development (Wellman, Cross, & Watson, 2001).

Recent research suggests that individual differences in ToM could be related to children's social experiences (Bosacki & Astington, 1999; Slaughter et al., 2002). One of the early studies to have looked at the relationship between social relations and ToM in preadolescent children was Bosacki and Astington (1999). In their study, they found that social competence (measure of social relations) is partially correlated to ToM abilities. Bosacki and Astington studied 128 preadolescent children where they completed



measures that looked at social competence and peer relations. Social competence was measured by observing interaction of the participants with their peers as well as rating of the behaviour from the teacher's perspective. The authors found that social understanding was partially related to their peer-related social interactions as well as general vocabulary. These results were also different based on gender with girls scoring higher than boys on both the social understanding and social competence measures.

Slaughter et al. (2002) conducted a series of studies that looked at the relationship of peer acceptance and ToM abilities in pre-school children. Their study found that there is a significant relation between acceptance by fellow peers and ToM abilities in pre-school children. The children in the study completed ToM tasks as well as a peer nomination task where the children had to nominate three peers who they would like to play with and three they would not like to play with. The authors found that children who had high ToM scores also had higher social preference scores that were calculated from the peer nomination task. The analysis of ToM scores by status group showed that popular children, whose peer status classifications reflect relatively many like most peer nominations, scored higher on ToM tasks compared to rejected children, whose classification reflects relatively few like most nominations. This pattern supports the hypothesis that popular children have a better understanding of other people's mental states, relative to their rejected peers (Badenes, Clemente Estevan, & Garcia Bacete, 2000).

In Slaughter et al.'s (2002) second study, in addition to the ToM tasks and peer nomination tasks, the children completed verbal intelligence tasks as well as their teacher completed a 57-item questionnaire containing items relating to the child's prosocial and

aggressive behaviours. This study again replicated the findings from the original study and found a significant difference between popular and rejected children's ToM abilities. The study, however, found that bright, verbally adept children tend to be relatively popular among their peers.

### **Background of the Problem**

ToM and its effect on peer relations have been extensively studied in early elementary years (Badenes et al., 2000; Caputi, Lecce, Pagnin, & Banerjee, 2012; Slaughter et al., 2002). Caputi et al. conducted a longitudinal study with children aged 5 years old and measured their theory of mind abilities and prosocial behaviour at three time points up to the age of 7 years old. They found that children's ToM abilities did predict their later prosocial behaviour and peer relationship. They were able to show that ToM skills and better peer relations were as a result of higher levels of prosocial behaviour. Badenes et al. looked at the relations between peer relations with ToM abilities with children between the ages of 4-6 years old. While they did not find strong relations of peer rejection with ToM abilities, they did see peer rejected children to perform worse in some verbal tasks compared to average children with high aggressive biases.

To date, few studies have explored how ToM affects peer relations such as peer acceptance and rejection among children between the ages of 9-12 years (Banerjee, Watling, & Caputi, 2011; Devine, White, Esnor, & Hughes, 2016). Banerjee et al. measured ToM abilities of two groups of children, one group aged between 5–6 years old and another group aged 8–9 years old. They found a bidirectional relationship suggesting that peer rejection may impair the learning of ToM abilities as shown by the performance

in the faux pas task. They also concluded that older children might have difficulties in understanding the ToM task if they have increased peer rejection, but this was a weak effect. Devine et al. conducted a longitudinal study looking at ToM, social competence, and executive functioning in middle childhood. Their study found evidence to suggest that individual differences in ToM to be an important factor for successful social interaction and behavior at school which was also found in the later time period.

While the aforementioned studies investigated peer relations and ToM during middle childhood, they differ with the current study in two ways. Banerjee et al. (2011) did not look at older adolescents aged between 8-12 years old, an age when children are undergoing developmental changes in the social, biological, and cognitive domains (Eccles & Roeser, 2009). While Devine et al. (2016) did study children aged 10 years and older, they measured social competence from the perspective of the teachers and not from the perspective of the children themselves.

Therefore, the current study plans to address this gap and investigate associations between advanced ToM and children's peer relation in children of age 9-12 years old, middle childhood. In particular, the study will explore the associations among, and individual differences in children's advanced ToM abilities and their peer relations such as acceptance among peers and rejection among peers. These peer relations may influence their self-concept, coping abilities, and emotional regulation (e.g., Achenbach, 1991).

In addition to peer relations, children's advanced ToM will be measured as previous studies found that some children with high functioning Autism Spectrum Disorder (ASD) pass simple ToM tasks very easily even though they have social,

communicative, and imaginative abnormalities (Baron-Cohen, Jolliffe, Mortimore, & Robertson, 1997). Advanced ToM abilities will be measured by having the adolescent children complete The Child Eyes Test (Baron-Cohen, Wheelwright, Spong, Scahill, & Lawson, 2001), which is known to tap into these advanced second order ToM skills. The children taking part in the study will also complete a Social Situation Task adapted from Boseovski, Lapan, and Bosacki (2013).

Additionally, based on past literature on empathy and ToM, high-functioning adults with ASDs showed specific deficits in comprehending the beliefs, intentions, and meaning of nonliteral expression and had significantly lower cognitive and affective empathy (Mathersul, McDonald, & Rushby, 2013); we will explore the possible connections among empathy with peer relations and ToM. We will also look at coping strategies with peer relations and ToM. A previous study by Bowker, Bukowski, Hymel, & Sippola (2000) showed that withdrawn children were more likely to engage in emotion-focused coping, and less likely to use problem-focused coping showing that there is a connection between children's social standing in the peer group and coping strategies that are being employed.

We will also be looking at the effect of ToM, peer relations, and self-concept measures to replicate previous findings by Bosacki (2000) where she found evidence to suggest that children's view about themselves had an influence on their ToM abilities and how they related to their peers. In addition, the current study will look at the effect of peer attachment to peer relationships formed based on past literature showing that attachment relationships form the context in which children learn about and begin to understand social and emotional experiences (Contreras, Kerns, Weimer, Gentzler, &

Tomich, 2000)

Lastly, we will explore age and gender differences among the main variables of ToM to see whether we can replicate findings from previous studies where they found girls to perform significantly better than boys at all the ToM components and older children performing better than younger children (Bosacki, 2013; Bosacki & Astington, 1999; Boseovski, Lapan & Bosacki, 2013).

### **Purpose of the Study**

The purpose of the study is to investigate self-reported perception of peer relations and ToM abilities in children between the ages of 8-12. We are interested in particular acceptance and rejection among peers as a result of their ToM abilities. Furthermore, we are interested to look at how these peer relations (acceptance and rejection) shape their self-concept, empathy scores, and coping mechanisms to deal with their peer status of being accepted or rejected. We will also look for gender and age differences in coping mechanisms and self-concept development.

### **Research Questions**

The study seeks to answer the following research questions:

1. What are the relations between middle-aged children's advanced ToM abilities and their peer relations, in particular peer acceptance and peer rejection?
2. What role does peer relations (being accepted versus rejected) play in forming different coping skills, self-concept, and empathetic understanding in middle-aged children?
3. What role does gender and age play in ToM abilities and peer relations?

### **Scope and Limitations**

The current study examined the relationship between children's perceptions of peer relations and their advanced ToM abilities. The study also explored the relationship between peer relations with coping skills, peer attachment, empathy, and self-concept measures. The research on ToM and peer relations in early adolescent is limited; therefore, the current study will be able to add to the literature.

However, the current study did not plan to look at ToM abilities in the group testing sessions due to limitation in time. As a result, it limited the generalizability of the findings. The study also did not include a measure for verbal ability, which is often used to measure ToM abilities.

### **Outline of the Remainder of the Document**

Chapter One has introduced the research area of the current study, understanding the relations between theory of mind abilities and peer relations in middle-aged children in a school setting. The remainder of the document will explore literature to support past research of this investigation. Chapter Three discusses details about the research design, the selection of participants, research procedures, and the methodological assumptions and limitations. Chapter Four discusses the quantitative and qualitative results. Finally, Chapter Five discusses the significance of the results, the responses to the research questions, and the implications of this study in practice, theory, and future research.

## **CHAPTER TWO: LITERATURE REVIEW**

This chapter outlines an overview of the literature starting with a theoretical framework, social cognitive theory. Then the chapter follows with definitions of the main concepts such as ToM, peer relations, role of ToM on self-concept formation, and coping strategies. These concepts are reviewed, gaps in the current literature are identified, and the implications of applying these concepts to practice are outlined.

### **Social Cognitive Theory**

The social cognitive theory is based on the theoretical premise that an individual can acquire knowledge from directly observing others. This observational learning can take place within the context of social encounters, interaction with peers and family, experiences from these interactions, and outside media influences (Bandura, 2001). In this model, Bandura predicts that behavior, cognition, and other personal factors along with environmental influences all interact with each other and influence each other bi-directionally. According to Bandura, humans have the ability to control their life by using some core features, such as “intentionality, forethought, self-reactiveness and self-reflectiveness” (p. 6-11).

In the context of the current research project, the behaviour of the adolescent can be influenced by the personal characteristics (ToM abilities, self-concepts) and their environment (school, home). These factors can affect each other in a bi-directional format. Additionally, the influence of peers and family members can cause the adolescents to form different self-concepts as well as adopt different coping mechanisms. Regardless of the adolescent’s social conditions, researchers need to explain the varied

directions that one's personal life can take at any given time and place. This requires a personal, as well as a social, analysis of one's' life paths (Bandura, 2001).

The current study is interested to explore how some of these personal and environmental factors can influence the adolescents' behaviour and cognition. It is hypothesized that possessing different ToM abilities can cause the adolescents to be accepted or rejected by their peers. The adolescent's inner self-concepts can also influence their peer relations in their environment (i.e., school and home). It is also believed that based on these interactions, the adolescent might also form different coping skills that are transferrable to different social situations. Lastly, the current study is also interested to see whether being empathetic plays a role in being accepted or rejected by peers.

### **Introduction to ToM**

The literature on ToM is outlined below to define what is ToM and its effect on peer relations, how empathy is related to ToM, and whether possessing ToM abilities allow for better coping mechanism. Several theoretical concepts related to ToM are highlighted.

#### **What is ToM?**

ToM is an important everyday social tool (Moore & Frye, 1991). People use ToM abilities to interact with others and predict behaviors. It is difficult to define ToM as it has been used to describe many different abilities (Doherty, 2008). Generally, it falls under an umbrella of abilities that include, but are not limited to, understanding mental states, distinguishing between mental and physical objects, interpreting the gaze of others, perspective taking, "mentalizing," and understanding desires and intentions. The



most fundamental of mental states that has been intensely researched are belief and desire. Wellman et al. (2001) described that a key stage of ToM development is when a child understands that beliefs are part of a person's reality and that this reality can be wrong. Studying beliefs allows us to understand behavioural intention, which, in turn, allows us to understand, explain, and manipulate behaviour. Using this idea of understanding behaviour from beliefs, philosopher Dennett (1978) proposed a seminal test to decipher mental states, such as false beliefs, and thus began the future of ToM research. Now, investigators look at false belief tasks to understand or explain behaviour in terms of ToM abilities. In the classic false belief task, a story is acted out with dolls and props. Other versions of the task involve stories, real people, pictures, and/or videos of real people.

ToM abilities have also been studied in a wide range of clinical ASD (Mathersul, McDonald & Rushby, 2013), schizophrenia (Frith, 2004), and Frontotemporal Dementia (Le Bouc et al., 2012), as well as healthy populations (Slaughter et al., 2002). Brüne and Brüne-Cohrs (2006), reviewed function of ToM using an evolutionary perspective and found that ToM could have evolved to facilitate cheating and to reinforce cooperation. Axelrod and Hamilton (1981) used the classical Prisoner's Dilemma test to investigate two hypothetical suspects at a crime scene. In the study, the prisoners were interrogated separately and were either given the option to cooperate ("it was neither of us"), to defect ("it was him"), or to confess ("it was me"). At the end, they would be given their punishment based on their interview. The expected punishment would vary based on the responses with cooperation leading to the best outcome for both the prisoners (e.g., 1 year in prison if both cooperate, 4 years if both defect, 5 years for the cooperator, if the other

defects, who himself would escape punishment). The problem of altruistic behavior and cooperation has led Trivers (1971) to suggest that in humans, several psychological mechanisms evolved to protect against cheating and to reinforce cooperation, clearly including what was later called ToM. For the purpose of this paper, I will focus mostly on ToM in children.

We can appreciate importance of ToM more when we study what happens when there are impairments in ToM abilities. Baron-Cohen (1995) tested ToM abilities in both children and adults who have autism or Asperger's syndrome to find out more. When children lack ToM abilities, they are unable to perform False-Belief tasks (Baron-Cohen, 1995). In his study, Baron-Cohen (1995) found that children with autism had greater difficulty with false belief tasks while being able to perform other problem-solving tasks at a normal level. False belief tasks need the participants to recognize that others can have beliefs about the world that are diverging from their own. An example of a false-belief task is when a boy leaves chocolate on a shelf and then leaves the room. His mother puts the chocolate in the fridge. To pass the task, the child must understand that the boy upon returning holds the false belief that his chocolate is still on the shelf.

In another set of studies with adults, Baron-Cohen, Jolliffe, Mortimore and Robertson (1997) designed an experiment called the Reading the Eyes test where he found that adults with autism cannot predict the correct word to describe pictures that were shown to them. It is now widely accepted that children and adults on the autism spectrum struggle with ToM. ToM impairments have also been seen in youth with psychosis (Zhang et al., 2016), development of antisocial behaviour and conduct

problems (Sharp, 2008), and patients with schizophrenia (Browne et al., 2016). These above-mentioned studies show that ToM is important in social functioning.

It is generally accepted that typically developing children possess ToM abilities by the age of four (Wellman et al., 2001). However, there are debates about when ToM abilities start in children. Some studies say that it appears to start in children as early as during the second year of life (Bosco, Friedman, & Lesile, 2006) while other studies have found that children can perform ToM tasks, such as false belief tasks, as early as 4 years old (Wellman et al., 2001). Research also shows that advanced ToM ability continues to develop at least through adolescence (Bosacki, 2000, 2013). A comprehensive understanding of the function of ToM abilities during preadolescence and adolescence is particularly interesting since these phases of life are characterized by marked behavioral, hormonal, and physical changes (Coleman & Hendry, 1999), and maturation of certain aspects of cognitive functioning, such as the executive functions, that may be related to ToM (Dumontheil, Apperly, & Blakemore, 2010). As children continue to develop during middle childhood, their understanding of others becomes more sophisticated as a result of growing executive functioning (Carlson, Moses, & Claxton, 2004), working memory (Davis & Pratt, 1995), general language ability (Lohmann & Tomasello, 2003), and verbal memory (Jenkins & Astington, 1996; Slaughter et al., 2002).

### **ToM in Children**

ToM is known to be important in children in order for them to understand their own behaviour and of others around them such as their parents, siblings, and fellow peers. In the context of this research, it is necessary to situate ToM within the context of child development. It was initially understood based on Jean Piaget's theory that children

until the age of 7 years are “egocentric” and that they can only look at things from their own point of view (Piaget, 1976). However, advances in research have shown that young children acquire ToM abilities earlier than that.

Wellman et al. (2001) described that a key stage of ToM development is when a child understands that beliefs are part of a person’s reality and that this reality can be wrong. Dennett (1978) used the concept of false belief in children to measure their ToM abilities. In a classic false belief task, a scenario is presented where Maxi puts his chocolate in the kitchen cupboard and leaves the room to play. While he is away, his mother moves the chocolate away from the cupboard to a drawer. When Maxi returns where will he look for his chocolate, in the drawer or in the cupboard? Four and 5-year-olds often answer these tasks as saying that Maxi will search for it in the cupboard although the chocolate is really in the drawer. However, younger children generally fail to connect between belief and the real situation. They assert that Maxi will look in the drawer where it was moved. The difference in response between the 4-year-olds and above children versus younger children marks an important cognitive development age for children.

Another way ToM has been assessed is by telling the child a short story with the aid of toys or pictures (Baron-Cohen, Leslie, & Frith, 1985). At the end of the story, children are required to predict what will happen next, based upon the character’s beliefs and feelings (rather than their own). For example, children see a doll named Sally put her ball in a basket while her friend Anne watches. Then, after Sally leaves the room, Anne transfers the ball to another location, say, a box. Given that Sally did not witness this unexpected transfer, children are asked to predict where Sally thinks the ball is. If they

answer that Sally thinks the ball is still in the box, then they are considered to have passed the test of ToM. Predicting that Sally has a false belief about the location of the ball demonstrates the ability to attribute beliefs to Sally on the basis of her informational access, even when Sally has not seen everything the child has seen. It is too difficult for the young child to overcome its own perspective on the problem. Therefore, difficulty for young preschoolers depends upon the non-overlapping points of view held by the child and the character in the story

Other ToM tasks require children to report someone's belief about the unexpected contents, rather than the unexpected location, of an object (Gopnik & Astington, 1988). In this ToM task, children are first shown a familiar container, say, a candy tube. After the child says what they think is inside (candy), the experimenter opens the tube to reveal an unexpected content, say, a pencil. Children are then asked to report their own prior false belief, that is, what they first thought was in the container (candy). Then, children are asked to report what someone else would think was in the container (candy). The finding from this test is similar to the one from the unexpected transfer test with Sally and Anne. Young preschoolers fail to report false beliefs. Instead, they tend to report that they first thought the tube contained whatever they now know it contains (demonstrating the well-known hindsight bias). Also, young preschoolers predict that someone else will think the tube contains the unexpected, rather than the expected, contents, as if the other person has access to the knowledge they now hold. Both cases require the child to report a belief that is different from the one they currently hold to be true. Performance on these classic tests of ToM measuring children's ability to report someone's false belief are moderately

correlated, even when age and verbal ability are accounted for, suggesting a fair degree of intertask consistency (Hughes & Dunn, 1998; Wellman et al., 2001).

It is now widely acknowledged and well-documented by numerous empirical studies that children and adults with Autism Spectrum Disorder (ASD) and Asperger's syndrome, a mild form of autism, have profound difficulties in appreciating the mental states of other individuals (e.g., Baron-Cohen, 1991; Baron-Cohen, Leslie & Firth, 1986; Baron-Cohen et al, 1997; Baron-Cohen, Wheelwright, Spong, Scahill, & Lawson, 2001). Such deficits in mental state comprehension have been shown to be selective, as other cognitive capacities seem to be well preserved in people with ASD (Baron-Cohen, 1991; Baron-Cohen et al., 1986). However, relationship of ToM deficits in other psychopathological conditions and psychiatric disorders is less clear. There is, however, growing evidence that impaired ToM may also lie at the core of certain psychotic symptoms in endogenous psychoses and behavioral deviations found in heterogeneous disorders affecting frontal lobe functioning—from psychopathy to frontotemporal dementia. It has also been widely used for research in developmentally delayed individuals. Baron-Cohen (1995) claimed that severe social disconnectedness is evident in even high functioning individuals with autism.

### **ToM, Peer Relations and Self-Concept**

Self-concept is an internal view of the self that is formed from the beliefs one holds about oneself and from the responses of others (Harter, 1990). Although self-beliefs are ever-changing and dynamic as it can change by experiences across the lifespan (Heckhausen, Wrosch, & Schulz, 2010), it has been identified as an important component of development during early adolescence (Sebastian, Burnett, & Blakemore, 2008).

However, literature is limited when it comes to construction of self-concept for preadolescents. Bosacki (2000) conducted a study to investigate the relationship between ToM, social understanding and forming self-concept. In her study, she tested over 100 pre-adolescent children to find that a positive correlation exists between ToM and mental self-concept. There were significant differences between boys and girls such that girls performed significantly higher on the social and self-understanding tasks. This finding was consistent with previous studies that show that girls are better behaved than boys (Harter, 1985). Following this assumption, the current study is interested in looking at how peer relations are affected as a result of ToM abilities and existence of certain self-concepts. We are also interested in looking at whether the gender differences found in Bosacki (2000) is replicated in the current study.

### **What is Peer Relation?**

The concept of peer relations in educational psychology is related to understanding relationships between fellow peers in terms of their acceptance, rejection, or friendship (Asher & Coie, 1990). Children's friendships have inevitable ups and downs. Yet, the feelings of satisfaction and security that most children derive from interacting with peers outweigh periodic problems. For a number of children, however, peer relations are constantly problematic. Some children are actively rejected by peers while others are simply ignored or neglected. It even appears that some popular children have many friends but nevertheless feel alone and unhappy (Newcomb & Bagwell, 1995). What makes some children better at making friends while others feel rejected? It is necessary to understand the role of peer relations as it is an important part of social and emotional development of children and adolescents. The past research has mainly looked

at peer acceptance and peer rejection. In the following section, research on peer relations in children and young adolescents are elaborated.

Harry Sullivan (1953) proposed that experiences with peers in childhood and early adolescence provide learning opportunities for important social skills such as cooperation, altruism, and empathy. He further argued that interactions with real and imagined others were the basis of the self in terms of building one's personality. It is also related to adjustment to school, self-worth, and self-esteem (Connell and Wellborn, 1991). Peers are important in children's academic development, social functioning, and psychological well-being (Wentzel, 2009). In particular, peer acceptance, whether an individual is liked or disliked by his peers, is an indication of well-being. Also, peer rejection has been able to forecast adjustment problems in adulthood (Parker & Asher, 1993; Rubin, Wojslawowicz, Rose-Krasnor, Booth-LaForce, & Burgess, 2006).

Peer relationships can be important sources of affection, intimacy, reliable alliance, feelings of inclusion, and enhancement of self-worth (Erdley, Nangle, Newman, & Carpenter, 2001), and have been linked to both the current and future well-being of children. Research studies have demonstrated that having positive peer relationships in the early elementary school years is associated with an increase in social competence and acceptance throughout the later school years (Kupersmidt & Coie, 1990), whereas poor peer relationships are known to forecast negative outcomes later in life such as early school withdrawal, delinquency, substance abuse, and mental health problems (McDougall, Hymel, Vaillancourt, & Mercer, 2001; Woodward & Fergusson, 2000). Children who engage positively with their peers also tend to be more motivated in school and perform better on academic tasks (Wentzel, 2009). In addition to its relationship to



academic outcomes, peer acceptance also has been found to be significantly associated with self-reported well-being. Engaging in positive relationships with peers has been linked to higher levels of emotional well-being, increased adoption of values for prosocial behaviors, and more positive beliefs about the self (Rubin et al., 2006).

Recently, researchers have argued for taking a strengths-based approach in investigating child and adolescent development by including positive dimensions of social and emotional skills and well-being when examining young adolescents' peer relationship (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004). Positive youth development (Benson, Scales, Hamilton, & Sesma, 2006) is one such example where the researchers are looking at the strengths and capacities of youth rather than looking at their weaknesses.

Oberle et al. (2010) investigated the relationship of self-reported affective empathy; optimism, anxiety (trait measures), and positive affect (state measure) to peer-reported peer acceptance in 99 grade 4 and 5 students. The students had to answer some questionnaires that asked questions regarding their empathy levels, both positive and negative affect, anxiety related items, and optimism scores. These scores were correlated with peer acceptance ratings that were done using peer nomination procedure. The study found that girls' acceptance of peers were significantly predicted by higher levels of empathy and optimism, and also lower positive affect. For boys, higher positive affect, lower empathy, and lower anxiety significantly predicted peer acceptance. Their results emphasized the importance of including indices of social and emotional well-being in addition to peer ratings in understanding peer acceptance in early adolescence, something that the current research study is going to look at.

Many research studies have looked at factors that can predict peer acceptance. Well-liked children tend to be kind, cooperative, friendly, and helpful, whereas rejected children tend to show heightened levels of aggression, disruptive behaviors, withdrawal, and submissive behaviors (Asher & McDonald, 2009). Decovic and Gerris (1994), for example, reported that besides having social cognition skills (i.e., differentiation of perspectives and perspective taking), being perceived as helpful, cooperative, empathic, and sympathetic by peers significantly predicted popularity in the peer group for 5th grade students. Similarly, Greener (2000) found that 8- to 12-year-old children who were rated as more prosocial by their peers had fewer social adjustment problems (i.e., were less rejected or neglected) than children who were perceived to be less prosocial. Studies have also found that anxious youth perceive themselves as being rejected by their classmates and report fewer friendships than do non-anxious youth (Juvonen & Graham, 2001). Taken together, these studies predict that children's peer acceptance is positively associated to psychological adjustment and prosocial behaviors and negatively associated with aggression and maladjustment

Compared to research with early elementary school students, there exist relatively few empirical studies that have investigated peer relationships in early adolescence. The lack of research is surprising given that the early adolescent age period has been characterized as a time of critical transitions (e.g., from elementary school to middle school) and developmental changes in the social, biological, and cognitive domains (Eccles & Roeser, 2009). The current study plans to address this gap by looking at peer relations, coping strategies, empathy measures, and advanced ToM in early adolescents between the ages of 8-12 years old.

### **Importance of Peer Relations and Theory of Mind**

In the above sections, we discussed research conducted on ToM in children. We also reviewed literature on the importance of peer relations in children and adolescents. In the following section, we will try to integrate ToM and peer relations by looking at the role ToM plays in the formation of peer relations.

Research conducted in the past 10 years have found evidence to show that understanding of the mind develops through social relationships (Dunn, 2008; Hughes & Devine, 2015). Previously studies have shown that preschoolers with siblings demonstrate false belief understanding at an earlier age than children without siblings (Jenkins & Astington, 1996; Perner, Baker, & Hutton, 1994). This “sibling effect” was replicated as well by PrimePlamondon, Pauker, Perlman, and Jenkins (2016). Lewis, Freeman, Kyriakidou, Maridaki-Kassotaki, and Berridge (1996) also found in one study an association between number of siblings and performance on false belief tests, but, overall, they found a more consistent effect of older siblings and kin on the development of false belief understanding. In a series of experiments with a large number of participants, beneficial effects were found for older but not younger siblings (Ruffman, Perner, & Parkin, 1999). There is further evidence of correlations between social cognitive development and parenting style (Ruffman et al., 1999).

A number of studies previously have found correlations between language and social understanding (e.g., Hughes & Devine, 2015; Wang, Ali, Frisson, & Apperly, 2016). In longitudinal studies, different forms of family talk about mental states have been correlated to later success on false belief tests (e.g., Ruffman, Slade, & Crowe, 2002). In addition, mothers who think of their children in mentalistic terms and talk to

their children about the psychological world have children who are more advanced in understanding beliefs than are other children (Meins & Fernyhough, 1999; Meins, Fernyhough, Russell, & Clark-Carter, 1998). Similar correlations have been found between family interaction and the development of children's understanding of emotions (e.g., Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991; Hooven, Gottman, & Katz, 1995). In a longitudinal study, Astington and Jenkins (1999) found that earlier language abilities predict later false belief performance but earlier false belief competence does not predict later language abilities, supporting the conclusion that language is important in social cognitive development.

Few studies, however, have looked at children's understanding of the mind and social development beyond childhood years (Watson, Nixon, Wilson, & Capage, 1999). Bosacki (2013) is one of the few that have conducted longitudinal research from later childhood to early adolescent years on the relations between the various dimensions of social understanding and perceptions of social verbal communication. Bosacki (2013) also looked at how gender plays a role in children's language competencies and conversational preferences. In the study, 17 Euro Canadian children from middle socioeconomic status, semirural neighborhoods completed standardized pencil-and-paper measures and participated in individual interviews that involved social stories to assess children's emotional and ToM understanding (e.g., how did they interpret mental states in others), and their perceptions of conversational patterns, such as talking and listening, with their friends and family at two separate time points in a span of 3 years.

The self-report questionnaires assessed self-perceptions, and the interviews included questions regarding talking and listening experiences with peers and families

(Bosacki, 2013). This mixed method research was explored the relations between children's ToM understanding their perceptions of self and talking and listening with peers and family at different time points. The study was able to show that there exists a significant age effect for ToM understanding. The older the children were, the higher the ToM understanding scores were. Further correlational analysis also revealed positive relations between positive perceptions or the number of positive emotion words of conversational patterns and ToM understanding for boys only. That is, boys who were more likely to perceive experiences of talking and listening as positive emotional experiences were also more likely to score relatively higher on the ToM task. The current study will be able to further explore the gender differences in ToM abilities for children of different ages.

Moore, Bosacki and Macgillivray (2011) looked at how ToM influences the way children interact with unfamiliar peers. In the study, the author s arranged for small mixed-gender groups of children unknown to each other to attend group play sessions in the laboratory. The children were all tested individually on standard ToM tasks and verbal intelligence. During the play sessions, children were observed in groups of four or five to allow for a variety of possible interactions, including dyadic and group play, as well as solitary play. They also had the children observe one or more children in play. The child did not take part in any ongoing activity apart from observing others.

Moore et al. (2011) measured the total time spent in each activity along with who initiated the play. The authors were especially interested to see whether the level of ToM would predict children's social interest versus solitary play, and the extent to which children initiated and participated in social interaction. They also tested the children for

their understanding of mental states in others and in self. Despite finding high variability in performance on the ToM tasks, Moore et al. found no associations between ToM and proportion of time spent in, and number of episodes of, actual social engagement, number of interactive partners, or the number of social bids made or received.

However, Moore et al. (2011) found positive associations between ToM and proportion of time spent in, and number of episodes of, onlooker behaviour. Their study suggested that ToM does not predict the initial negotiation of social relations in situations with unfamiliar peers. It is possible that the initial social engagement between unfamiliar peers may depend more on temperamental or trait characteristics. The authors also predicted a connection between ToM and social interest in that children who are socially interested, yet initially more reserved, spend more time watching and learning about others and that this advances their social understanding. However, they alluded to further research in this domain to provide better predictions.

A recent meta-analysis conducted by Slaughter et al. (2015) looked at the relationship between Theory of Mind and Peer Popularity in the Preschool and Early School Years. Their meta-analysis included 20 studies including 2,096 children (aged from 2 years, 8 months to 10 years) and found a statistically significant mean effect indicating that children's ToM understanding is positively linked to their concurrent peer popularity. This finding is consistent with the idea that children who are competent at understanding others' mental states engage in effective social behaviors, leading to their being well-liked and highly regarded by their peers, while those whose ToM is relatively poor are less socially capable and, as a result, are not well-liked or regarded as popular by their peers. However, the magnitude of this overall effect is small, with children's ToM

understanding accounting for just 3.6% of the variance in peer popularity. The small overall effect size is understandable in light of the research on determinants of children's peer popularity which indicates that in addition to ToM understanding, there are numerous physical, personality, cognitive, and behavioral factors that are associated with children's sociometric and perceived popularity (for reviews, see Coie, Dodge, & Kupersmidt, 1990; Rubin et al., 2006). Some of these factors, such as communicative competence, cooperativeness, prosociality, and low levels of overtly aggressive behavior may themselves be at least partially linked to children's ToM (Cassidy, Werner, Rourke, Zubernis, & Balaraman, 2003; De Rosnay, Fink, Begeer, Slaughter, & Peterson, 2014; Renouf et al., 2010; Slaughter et al., 2002), whereas other factors, such as attractiveness, athletic ability, IQ, and academic achievement, would be independent of ToM understanding

### **Coping Mechanisms in Children**

Coping skills are skills that a person uses to deal with stressful situations. The primary justification for studying coping skills is to see how people react when faced with challenging situations. Developmental theorists have proposed that adolescents face different types of issues and problems during different stages of development and, as a result, develop different coping skills to handle them (Erikson, 1968). There has been much done in the field to understand age related coping strategies in adolescents, but it is not clear how stress is perceived differently across time and how that changes coping skills development.

While researchers have made considerable progress in understanding the emergence, maintenance, and consequences of acceptance versus rejection by the peer

group (see Asher & Coie, 1990, for reviews), it is important to look at how children deal with being accepted or rejected by their peers. Being rejected by peers is an emotion-eliciting event in a child's life (Nolan, Flynn, & Garber, 2003). It can invoke strong negative effects, feelings of loneliness, and social anxiety (Asher & Wheeler, 1985; Boivin, Hymel, & Bukowski, 1995). As a result, it is important to study how adolescents handle these negative stressors.

There are individual differences in how children deal with peer rejection experiences and how they manage the negative emotions elicited by the event that may be linked to social and psychological adjustment (Sandstrom, Cillessen, & Eisenhower, 2003). Moreover, previous research has found that persistent peer rejection in early and middle childhood predicts subsequent externalizing behaviour problems including truancy, school dropout, involvement with antisocial peers, and delinquency (e.g., Kupersmidt & Coie, 1990). Although the mechanisms governing this linkage are still unclear, it has been suggested that children who experience frequent peer rejection are (a) more inclined to attribute hostile intent to peers, (b) more likely to generate inappropriately aggressive responses to peer rejection events, and (c) are less skilled at enacting competent behavioural responses (Dodge & Pettit, 2003).

Research has shown that there are many ways of coping, such as problem solving, negotiation, rumination, accommodation, escape, confrontation, and help seeking (Seiffge-Krenke, 2011; Zimmer-Gembeck & Nesdale, 2013). It is important to see what type of coping skills children employ when they are exposed to stressors that commonly take place in their school environment.

Few studies have examined how children cope with everyday peer rejection



experiences. Bowker et al. (2000) examined the connection between children's social standing in the peer group, behavioural style (aggressive vs. withdrawn), and coping strategies in response to peer hassles, including rejection. Results revealed that more withdrawn children were more likely to engage in emotion-focused coping, and less likely to use problem-focused coping. Moreover, aggressive/unpopular boys and girls were most inclined to respond aggressively, whereas aggressive/popular girls reported using more problem-focused coping strategies.

Although the tendency to respond negatively to perceived rejection is likely to be universal, research has shown that children differ greatly in their sensitivity and reactions to rejection (Dodge & Pettit, 2003; Sandstrom, Cillessen, & Eisenhower, 2003). Children scoring higher on depressive symptoms may be vulnerable to heightened emotional response to interpersonal stressors such as peer rejection (Quiggle, Garber, Panak, & Dodge, 1992), as well as depressive symptoms were linked to children's endorsement of more negative, passive, and avoidant emotion-regulating strategies to cope with negative effect elicited by everyday stressors including peer problems. Previous work has also shown that girls report more distress and hurt feelings than boys when faced with peer rebuff (e.g., Crick, 1995; Galen & Underwood, 1997). In addition, Dodge and Feldman (1990) have provided evidence to suggest that girls are more likely than boys to respond passively when faced with peer difficulties.

Reijntjes, Stegge, and Meerum Terwogt (2006) had children between 10-13 years old answer questions regarding their anticipated emotional response and their anticipated use of several specific coping strategies in response to vignette-depicted peer rejection. They examined the role of gender and level of depressive symptoms in predicting

children's anticipated emotional distress and their self-reported use of cognitive and behavioural coping strategies. They found that the most highly endorsed coping strategies were behavioural distraction, problem-focused behaviour, and positive reappraisal. They also found that children higher in depressive symptoms reported a more negative anticipated mood impact.

Moreover, Reijntjes et al. (2006) found that children higher in depressive symptoms were less inclined to endorse behavioural and cognitive coping strategies typically associated with mood improvement (e.g., behavioural distraction, positive reappraisal). Independent of depression, they also found that children scoring higher on perceived social competence reported more active, problem-oriented coping behaviour in response to the stressors. Types of coping were largely unaffected by gender; however, girls reported higher levels of anticipated sadness than boys in response to the rejection vignettes.

### **CHAPTER THREE: METHODOLOGY**

This chapter examines the study's research methodology including the details of the research design, the selection of participants, research procedures, and the methodological assumptions and limitations. The chapter also examines the methods of data collection, analysis, and interpretation

The present study explored self-reported perception of peer relations and ToM abilities in children between the ages of 8-13 years old. The study also explored how peer relations (acceptance and rejection) shape self-concept, empathy levels, and coping mechanisms. Additionally, the study looked at gender and age differences in the conducted measures.

#### **Research Design**

This study used an exploratory mixed method research design. The study used both quantitative and qualitative methods in combination to look at the effect of peer relations (acceptance and rejection) and theory of mind abilities. Usually in a mixed method research design, in the quantitative research section, the researcher identifies “a research problem based on the trends in the field or on the need to explain why something is occurring” (Creswell, 2012, p. 13). The data include closed-ended information similar to what is found on an attitude, behaviour, or performance instrument (Creswell & Plano Clark, 2007). Creswell (2012) suggests that the purpose of using mixed methods could be to provide an alternative perspective in an area of research. The purpose of applying mixed methodology to this study will provide an alternative methodological approach to studying ToM in pre-adolescent children using both quantitative questionnaires as well as a qualitative interview about their understanding. According to Creswell (2012),

qualitative research is best suited when the inquirer wants to address a research problem in which the variables are not known and need to be explored, and incorporates data derived from open-ended information that researchers gather through interviews, private documents, and audiovisual material. For the purpose of this study, the children in the study will undergo an interview process based on Bosacki (2000). They will read two vignettes and, after reading them, will be asked questions about what the characters in the story will do next. The children also completed an additional ToM measure during interview, The Child's Eye test (Baron-Cohen et al., 2001). For the quantitative part of the study, each participant will complete pre-existing questionnaires that pertain to peer relations, coping strategies (Causey & Dubow (1992), loneliness measures (Cassidy & Asher, 1992), empathy measures (Davis, 1983), self-concept measures (Harter, 1982) and quality of peer relationships using the Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987).

### **Methodological Assumptions**

The nature of the current study places certain limitations on how the results can be interpreted.

First, the research was not designed to determine cause and effect. The study wanted to explore students' perceptions of their peer relations. Then, the study wanted to look at relationships between ToM and peer relations. Additionally, the study wanted to see if these peer relations have any effect on children's self-concept, empathy levels, and coping mechanisms. Thus, the research is exploratory.

Secondly, the ToM measure, Child's Eye Test, was only conducted during the interview session. As a result, there is a lack of data from this task for analyzing the data.

Future research can look at this measure conducted in a group setting and can provide further information about ToM abilities in children in the middle school ages.

Survey research regarding beliefs and self-concept is inherently at risk for threats to internal and external validity (McMillan & Schumacher, 1997). Relying on survey responses alone for data analyses limits the external validity of the research findings. Self-report surveys are subject to social desirability biases as participants may want to present themselves in the best light possible, or answer in a manner the participant believes the researcher would like them to. While this is a threat, the value of exploring children's views about themselves outweighs the risks. Additionally, participants were asked to be as honest as possible, and were clearly informed that their responses were anonymous. Ideally, the study would involve observations of the children interacting with their peers. However, due to a lack of both time and human resources, observations could not be conducted for this study.

### **Selection of Participants and Research Site**

Participants were recruited from a Catholic school board in Southwestern Ontario. Upon receiving approval from Brock University's Research Ethics Board (REB) permission, external research applications were sent to multiple school boards. One school board approved the research project to be conducted with their schools. The research consultant from the board selected five schools to conduct the research. Following permission from the School Board Research Review Committee, principals from each of the five schools were invited to take part in the study. The research consultant selected the grades 4,5, and 7 based on the age range of 8-13 years old requested by the research application.

To allow for the largest sample size possible, participant selection was not stratified by sex; however, analyses were conducted to examine possible age and sex effects.

For the interview phase of the study, peer relation scores from group testing sessions were first calculated. Then from each class, two students with highest peer acceptance and highest peer rejection scores were selected. We also had selected three extra students from each class in case someone was absent on the day of the interview.

### **Measures**

The data testing was conducted in two parts, phase I and phase II. The measures used in the two testing phases are described below.

#### **Phase I- Group Testing Sessions**

Data were collected in two phases for the study. First, during the group testing session, students from grades 4, 5, and 7 answered questionnaires on a paper and pencil format. The researcher read the questions out loud to the students and the students answered the questions on the booklets that were provided to them. After data collection, each student was assigned a unique identification number, which was used during data analysis

**Peer relations measure.** Peer relation (peer rejection and peer acceptance) was measured using a sociometric measure (Coie & Dodge, 1983). In the peer nomination, students were first asked to circle names of three classmates with whom they “would like to be in school activities” and with whom they “would not like to take part in activities” from the list that was provided to them. The list consisted of names of participating classmates whose parents had consented for them to take part in the study. For both peer

acceptance and peer rejection, the percentage of nominations received was computed by dividing the number of nominations received for each student by the number of participating students in the classroom.

**Self-concept - Harter's (1982) self-perception profile for children.** This measure was used to understand self-perception of children's social competence and behavioral conduct, and to assess overall self-worth (global self-worth). The students rated their perceptions of social competence on a scale of 1-4 with higher scores representing greater social competence, similarly for behaviour conduct and self-worth. Cronbach's alphas score for this measure was between 0.73 and 0.81. The test-retest stability of the SPPC over a 4-week interval was good: all intraclass correlation coefficients were 0.84 or higher. Muris, Meesters, and Fijen (2003) also found good validity scores for the SPPC when compared with other scales such as the Trait Anxiety Scale of the State, Trait Anxiety Inventory for Children; and Spence Children's Anxiety Scale.

**Inventory of parent and peer attachment (IPPA).** The participants also completed the shorter version of the IPPA (Armsden & Greenberg, 1987; Raja, McGee, & Stanton, 1992). For the purpose of this study, only the items measuring attachment to peers was used. This questionnaire measured the quality of the relationship with peers. The scale consisted of 12 items ( $\alpha=0.82$ ) which looked at the quality of communication, the degree of trust, and alienation in peer relationships (e.g., "I tell my friends about my Peer relationship problems and troubles"). A 4-point Likert scale will be used with categories of (1) almost never, (2) sometimes, (3) often, and (4) almost always. Trust scale measured the degree of mutual understanding and respect in the attachment

relationship, the Communication scale assesses the extent and quality of spoken communication and the Alienation scale assesses feelings of anger and interpersonal alienation.

**Empathy measures.** Davis's (1983) multidimensional self-report instrument of individual differences in empathy from the Interpersonal Reactivity Index was used to measure cognitive and affective empathy. The Empathic Concern subscale assessed the general tendency to feel compassion and concern for others and is comprised of seven items. The items assessed the affective dimension of empathy (e.g., "I often feel sorry for people who don't have the things I have"). Items are rated from 1= Not at all like me, to 5=Always like me. The mean score for all items was calculated after reversing items, if appropriate. Higher scores indicated higher level of affective empathy. The alpha scores were in the range of 0.71-0.79 for the different sub domains. Roberts, Strayer & Denham (2014) found good psychometric properties for the questionnaire

**Loneliness measurement.** The 24-item loneliness and social dissatisfaction questionnaire by Cassidy and Asher (1992) was used to measure loneliness in the current study. The LSDQ includes eight filler items about hobbies and daily activities, interspersed with 16 test items that focused on loneliness, social adequacy, and estimates of peer status. The Cronbach's alpha scores for the questionnaire were 0.79. Galanaki & Kalantzi-Azizi (1999) found good psychometric properties for the questionnaire.

**Coping styles.** The 22 items self-report questionnaire on coping styles by Causey and Dubow (1992) was used to examine coping styles in children. Each item on the scale is scored on a 5-point Likert scale ranging from never (1) to always (5). The measure is based on three coping subdomains: seeking social support, problem solving, and



distancing. The use of problem solving and social support seeking strategies were considered the approach style, while the distancing was considered the avoidance style. The measure asked questions about two possible stressors such as getting a bad grade and having an argument with friends. Then, it asked the child to rate based on these hypothetical stressful situations. Cronbach's alpha score for the measures ranged from .69 to .82 for coping with a poor grade and from .68 to .84 for coping with a peer argument showing good validity scores. The same test was given to the children in 2 weeks time and the scores were in the same region showing good reliability score. Rose & Rudolph (2006) found good psychometric properties for the questionnaire.

### **Phase II- Interview**

During phase II, students completed the measures on a one-on-one basis on a separate day from the group testing sessions. The interview was audiotaped for recording purpose. Each student was read the instructions first and then was asked to complete the two measures.

**ToM measure 1.** Socially Ambiguous Stories was one of the two ToM measures. In this task, the children read two ambiguous vignettes that elicit perceptions of being "left out" or neglected from their peers (Bosacki, 2000). Following the vignettes, the children were asked questions such as imagine and predict what the characters would do next, what they are thinking and feeling, and whether the actions would be considered the right or wrong thing or moral judgments. They were also asked to imagine what would happen next in the story. The vignettes would also be gender appropriate to explore gender-related differences. Coding from Bosacki (1998) was used to score ToM. The Cronbach's alpha scores for each story were 0.67 and 0.69.

**ToM measure 2.** The Child Eyes Test (Baron-Cohen et al., 2001; Peterson & Miller, 2012) adapted from the Reading the Mind in the Eyes Test (Baron-Cohen et al., 1997) was used to investigate advanced ToM performance. In this test, children were shown 28 pictures of eyes with four words around the picture. The child was asked to pick the word from the four options that best describes the picture. The Eyes Task involves ToM skills in the sense that the subject has to understand mental state terms and match them to faces (or parts of faces, in this case). The choice is always between two mental state terms, some of which are basic, in Ekman's (1992) sense, (e.g., happy, sad, angry, or afraid), and others of which are more complex, (e.g., reflective, arrogant, scheming, planning, etc.). The total number of correct answers was added to calculate their ToM score. The internal consistency (Cronbach's alpha) score was 0.69

**Total verbal count.** While the present study did not have any measurement looking at verbal ability, we were able to calculate a total verbal count based on the number of words each child used to answer the SAS stories.

### **Data Collection**

The study recruited 75 children of ages 8-13 from a semirural Catholic school board in Southern Ontario. Five of the students were absent during the group testing session and, therefore, were not included in the study, leaving a total of 70 students taking part in the study. There were 20 students in the age group of 8-9 years old, 23 students in age group of 10-11 years old, and 28 students for the 12-13 years old age group.

Upon receiving ethics clearance from the school board and Brock University Social Research Ethics Board, the study was conducted in two parts. Children who

received written informed parental consent and also provided verbal assent first completed paper and pencil questionnaires (including perceptions of peer exclusion, acceptance, popularity and coping style) within class time. Following the group-administered questionnaires, on a separate day, 14 of the student, 5 students from age group 8-9 years old, 4 from age group 10-11 years old, and 5 from age group 12-13 years completed the interview phase of the study. In this part, they read two vignettes that are related to socially ambiguous situations. After reading the vignettes, each child was asked to answer both closed- and open-ended questions regarding the stories to get a measure of their ToM understanding (Bosacki & Astington, 1999). The children also completed the Child Eyes Test (Baron-Cohen et al., 2001) for an additional measure of ToM.

For the interview phase of the study, students' peer relation scores from phase I were calculated and, based on the ratings, were invited to take part in phase II, interview sessions. Students who had the highest peer acceptance and peer rejection scores from each grade were invited to take part.

The survey was comprised of questions to measure peer relations, coping strategies (Causey & Dubow, 1992), loneliness measures (Cassidy & Asher, 1992), empathy measures (Davis, 1983), self-concept measures (Harter, 1982), and quality of peer relationships using the Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987). The questionnaires were all photocopied and put together in a booklet form for students to fill out. The order of the questionnaires varied from different schools, but they were all completed in the same order by the students who belonged in the same school. For the complete survey, please see Appendix C.

About 300 consent forms were sent to the parents of students from grades 4, 5 and

7. Seventy-five consent forms were returned with an acceptance rate of 25%. This low participation rate made it difficult to collect the planned 150-180 students for the group testing session. Additionally, there were delays with regards to starting the research study due to complexities within the Teacher Labour Union. As a result, the length of the study recruitment time could not be increased.

While participants were allowed to withdraw from the study at any time, no child actively withdrew from the study. However, they were given the option to leave out any question that they did not feel comfortable to answer. As a result, there were some missing data.

### **Data Analysis**

This study collected both qualitative and quantitative data. Following the collection and scoring of the data, the analyses were organized into three sections. First, preliminary analyses of the overall distribution of scores and descriptive statistics are presented. Then, the quantitative data are then described, and lastly the qualitative data.

#### **Quantitative Data**

Quantitative data obtained from students were analyzed using descriptive and inferential statistics. The descriptive statistics explored the means, standard deviations, frequencies, and ranges of the main variables. This section discusses the specific analyses for each of the research questions.

Prior to conducting any analyses, the data were cleaned and variables assessed for suitability of proposed analyses. Missing data analysis was conducted using Little's Missing Completely at Random test (MCAR) to look at whether data missing were

random. Normality, multivariate normality, and homogeneity of variance were also checked to ensure appropriate usage of parametric and nonparametric tests for analysis.

**Peer relation and advanced ToM.** This study chose to conduct the ToM tasks on an individual level. As a result, the analysis for this research question is described in the qualitative data analyses section.

**Role of gender and age in peer relations.** To answer the third research question, we first recoded the participants into two age groups, older adolescence (11 and 12 years old) and younger adolescent group (9 and 10 years old). Then we ran a Mann Whitney U Test to look at the effect of gender and age with both the peer relation measure, peer acceptance, and peer rejection. Nonparametric tests were used due to the nonnormal distribution of the measure being nonnormal and positively skewed.

**Role of gender and age on empathy, coping skills and self-concepts.** To look at the effect of age and gender on coping skills, empathy and self-concept, we ran ANOVA for all the measures. Due to some subscores not meeting normality assumptions, four measures of coping skills and two measures of SPSC were used in the analysis.

**Role of gender and age on peer attachment measures.** Nonparametric tests were used to measure effect of gender and age on these measures as both peer attachment score and its subscores. Trust, alienation, and communication were not normally distributed. Mann Whitney U test was conducted for the analysis.

**Peer relations and its relations with coping skills, empathy, and self-concept.** The second research question was to look at the effect of peer relations with coping skills, empathy, and self-concept measures.

***Peer relation and coping skill.*** First, we looked at the relationship of peer relations (acceptance and rejection) with the subscales of coping skills, such as self-reliant, social support, and distancing, for both academic and social problems. Kendall's rank correlation was conducted with each of the different subscales with peer acceptance and then with peer rejection.

***Peer relations and empathy.*** Kendall's rank correlation was conducted to explore the relationship of peer acceptance and rejection with empathy measure (Davis, 1983).

***Peer relations and self-concept.*** Kendall's rank correlation was conducted between the subscales of self-concept measure such as social competence, behaviour conduct, and global self-worth (Harter, 1982).

***Peer relations and peer attachment.*** Kendall's rank correlation was conducted with peer relations with IPPA subscales of peer attachment such as communication, trust, and alienation.

### **Qualitative Data Analysis**

The first research question of peer relations and advanced ToM was answered using an experimental task, Child's Eye test (Baron-Cohen et al., 2001) and open-ended questions from the Socially Ambiguous Stories (Bosacki & Astington, 1999).

**ToM measure 1.** Socially Ambiguous Stories was one of the two ToM measures (Bosacki, 2000, 2013). All of the 14 interviews were audio recorded and responses were transcribed. The transcribed responses were coded and scored based on the scoring scheme from Bosacki (1998). Then the total score from each story was added to get a total ToM score as well as subscores such as perspective taking, empathetic concern, person perception, and alternative thinking. Mean and standard deviation were calculated

from these scores. Additionally, chi-square tests were conducted for content analyses. Such interpretive analyses were performed for two main reasons: (a) to provide support for the quantitative analyses, and (b) to provide a richer or "thicker" description of the preadolescent mind.

Pearson correlation was calculated between total score from story 1 and total score from story 2. If the total scores are significantly correlated, then it is presumed that the two scores are related and, therefore, the analysis would include a final ToM score that would include scores from both the stories. Similarly, the sub scores from both the stories will be added to have a total score.

**ToM measure 2.** Total number of correct answers from the 28 pictures will be used as the ToM score for each of the children. Mean and standard deviation scores from the measure will be found.

***ToM and peer relations.*** Pearson correlation was conducted to investigate the relationship between Peer relations and two ToM tasks. It is expected that the relationship between SAS task will be significantly related. However, due to the lower sample size and lack of power, the Eye's Task will not reach significance.

***Effect of gender and age on ToM abilities.*** Multivariate Analysis of Variance (MANOVA) will be conducted to see the effect of age and gender on ToM abilities. We will run separate MANOVA looking at the subscales of the Socially Ambiguous Stories.

***Effect of gender and age on and ToM and peer relations.*** MANOVA will be conducted to see the effect of age and gender on peer relations and ToM.

### Summary

Chapter Three reviewed the methodology of the current research study. Students

from grades 4, 5, and 7 of a Catholic school board in Southwestern Ontario took part in the study.

They first answered closed- ended questions to explore their peer relations, empathy, and self-concept beliefs. Quantitative data of their responses were analyzed using descriptive and inferential statistics. Then, some students were asked to participate in an interview which included both open-ended and closed-ended questions that were analyzed. Qualitative responses were coded using grounded thematic analysis, while quantitative responses were analyzed using descriptive and inferential statistics Although the study's findings have limited generalizability, the study aimed to encourage further research on the topic of peer relation and ToM in middle school children.



## **CHAPTER FOUR: RESULTS**

The current study was interested in exploring children's self-reported perception of peer relations and ToM abilities in children between the ages of 8-13 years. The study also wanted to investigate self-concept formation, empathy scores, and coping skills in middle-aged school children. Furthermore, the current study was also interested in looking at the effect of age and gender on these measures. Results are based on quantitative data that included previously validated questionnaire measures. The study also included an interview phase, which included closed- and open-ended questions. Closed-ended questions were explored using quantitative analyses, while open-ended responses were analyzed using grounded thematic analysis.

### **Chapter Overview**

The chapter is divided into four main sections. The first section discusses the distribution of the data and methodologies employed for data transformation. The next section describes the demographics and descriptive statistics of the sample. The third section explores the quantitative data used to answer the first three research questions:

1. What are the relations between middle-aged children's advanced ToM abilities and their peer relations, in particular peer acceptance and peer rejection?
2. What role does peer relations (being accepted versus rejected) and ToM abilities play in forming different coping skills, self-concept and empathetic understanding in middle-aged children? Do they act as a mediator or moderator for the relationships?
3. What role does gender and age play in ToM and peer relations?

The fourth section summarizes the themes that came out from the quantitative data analysis and, lastly, a final section provides a summary of the study's findings.

### **Data Screening**

In cleaning the data, missing values were assessed. About 15% of data was missing, with Loneliness and Social Dissatisfaction questionnaire (LSDQ) being the highest with missing data. This was due to the fact that the LSDQ was not administered at one of the five schools resulting in missing 24 children, which explains the 14.8% missing for that questionnaire. As a result, data from LSDQ were not used in further analysis. The rest of the data represents actual missing data, which was about 8.6% missing. However, the sample did not pass the Little's Missing Completely at Random test even after LSDQ was removed from the rest of the study and analysis,  $\chi^2 = 190.94$ ,  $p = .018$  (Tabachnick & Fidell, (2013)).

According to the central limit theorem, samples larger than 30 are assumed to reflect a normal distribution of the population (Howell, 2013). The current study has a sample size of 70. Normality of the data was also checked using skewness and kurtosis measures. It was noted that total scores on the peer attachment scale and its subscores, communication, trust, and alienation (Kolmogorov-Smirnov test  $p < .05$ ), one of the subscores from SPPC (Harter, 1982) behaviour conduct (Kolmogorov-Smirnov test  $p < .01$ ), two subscores from coping skills questionnaire, self-reliance for academic issues and social support for academic issues (Kolmogorov-Smirnov test  $p < .05$ ) were skewed and nonnormal (Kolmogorov-Smirnov test  $p < .01$ ). Peer rejection and peer acceptance was highly positively skewed (Kolmogorov-Smirnov test  $p < .001$ ). Different transformation method was tried for the measures. The peer relation scores were

transformed by square rooting the original raw data. Upon transformation, scores were still skewed. Despite the transformation attempts, none of the peer attachment scale and its subscores, communication, trust, and alienation or the coping skills subscales, such as social support for academic issues and self-reliance for academic issues, were normally distributed (e.g., square root, log10, inverse; Tabachnick & Fidell, 2013).

The total empathy, subscores from SPSC social competence and global self-worth, social support for social issues, self-reliance for social issues, distancing for academic issues and distancing for social issues, were normal, respectively; (Kolmogorov-Smirnov test  $p > .01$ ).

Homogeneity of variance between gender (boys and girls) and age group (older adolescence and younger adolescence) was also looked at. The variances were equal for the two groups' older adolescence and younger adolescence for all the measures. However, for the differences in gender, two measures from the coping skills questionnaire, self-reliance and seeking social support for academic issues, were statistically different,  $F(1, 39) = 4.45, p < .05$  and  $F(1, 39) = 7.19, p < .05$ . Rest of the measures was equal and statistically not significant.

### **Student Demographics and Descriptives**

Participants in the current study were students from a Catholic school board in Southwestern Ontario. Seventy students took part in the study from five schools. There were 20 students from grade 4, 23 students from grade 5, and 27 from grade 7, with 39 girls and 31 boys taking part with a mean age of 10.5 years old and ( $SD$  1.2, Range 9-12). Mean and standard deviation of all the measures can be found in Table 1.

Table 1

*Mean and standard deviation*

Variables	Total	Boys	Girls
	N= 70	N=31	N=39
Peer Rejection	13.7 (13.3)	16.9 (13.6)	11.1 (12.6)
Peer Acceptance	15.2 (12.5)	14.4 (10.5)	15.8 (13.9)
Coping Skill: Social Support_Academic	22.6 (5.9)	21.6 (6.5)	23.4 (5.4)
Coping Skill: Social Support_Social	22.9 (7.8)	20.5 (8.3)	24.8 (6.9)
Coping Skill: Self- Reliance Academic	26.5 (6.1)	24.3 (6.6)	28.3 (5.0)
Coping Skill: Self - Reliance Social	26.8 (7.0)	24.0 (8.0)	29.2 (5.2)
Coping Skill: Distancing_Academic	15.4 (4.6)	16.0 (4.4)	14.9 (4.7)

Coping Skill:	14.9 (4.7)	15.5 (4.6)	14.2 (4.7)
Distancing_Social			
Empathy	17.7 (3.7)	15.0 (4.4)	19.7 (5.7)
Self-concept: Social	17.4 (3.9)	17.1 (3.3)	17.7 (4.3)
Competence			
Self-Concept:	18.8 (3.3)	16.8 (2.8)	20.2 (2.9)
Behaviour Conduct			
Self-concept: Global	18.8 (3.9)	18.6 (3.9)	18.9 (3.9)
Self-worth			
Peer Attachment:	27.8 (5.6)	25.3 (5.7)	29.9 (4.8)
Communication			
Peer Attachment: Trust	40.4 (8.1)	38.7 (8.5)	41.6 (7.6)
Peer Attachment:	17.5 (3.7)	17.7 (3.9)	17.3 (3.6)
Alienation			
Peer Attachment: Total	83.6 (15.9)	80.8 (13.6)	85.9 (17.3)

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### **Phase I – Group Testing Data Analysis**

This part of the chapter will look at the differences in the different measures that were used in the group testing session. The results are divided first to look at mean group differences followed by correlational analysis.

#### **Role of Gender and Age in the Different Measures**

To understand the differences in the groups based on age and gender, we used multivariate analysis of Anova (MANOVA) on normally distributed measures and Mann-Whitney U Test for non-normally distributed measures.

**Role of age and gender in peer relations.** Due to the distributions of the responses of peer nomination task, with peer acceptance and peer rejection scores being negatively skewed and non-normal (Kolmogorov-Smirnov test  $p < .01$ ), parametric tests were not used for those measures. Mann-Whitney U Test was conducted separately first for age and then for gender. There were statistically significant differences in peer rejection scores between boys and girls ( $U = 392.0, p = .012$ ), but no difference was seen for peer acceptance group ( $U = 596.50, p = .92$ ). We also did not see any statistically significant difference between peer accepted or rejected group with age, peer acceptance ( $U = 466.0, p = .10$ ) and peer rejection ( $U = 466.0, p = .10$ ).

**Role of gender and age on empathy.** Analysis of variance (ANOVA) conducted to investigate the effect of age and gender on empathy levels found no significant age and gender interaction,  $p > .05$ . However, there were significant effects of gender on empathy levels, with girls scoring higher than boys on the scale  $F(1, 60) = 13.93, p < .001$ , partial  $\eta^2 = .188$ . However, there were no age effects,  $p > .05$ .

**Role of gender and age on self-concept.** MANOVA conducted on age and gender with two of the sub scores of self-concept measures found no significant interaction of age and gender,  $p > .05$ .

**Role of gender and age on coping skills.** MANOVA conducted on age and gender with four sub scores of the coping skills questionnaire found no significant interactions of age and gender for all the measures ( $p > .05$ ). However, there was an effect of gender for sub scores  $F(4, 62) = 2.57, p < .05$ , partial  $\eta^2 = .142$ . Further analysis showed that univariately the effects of gender were significant for self-reliance techniques for social problems ( $F(1, 65) = 8.51, p < .05$ , partial  $\eta^2 = .116$ ). The other three measures did not have significant interactions ( $p > .05$ ).

**Role of gender and age on peer attachment measures.** Due to the distributions of the responses of the of the Total IPPA score and its sub scores, alienation, communication, trust being negatively skewed and non-normal (Kolmogorov-Smirnov test  $p < .01$ ) parametric tests were not used for those measures. Mann-Whitney U Test was conducted separately first for age and then for gender. There were no significant differences in peer attachment total scores ( $U = 549.0, p = .52$ ), and for sub scores alienation ( $U = 454.0, p = .73$ ), communication ( $U = 478.5, p = .66$ ) and trust ( $U = 488.5, p = .77$ ) between the two age groups.

However, there were significant differences between the two genders for total peer attachment score ( $U = 420.5, p = .029$ ) as well as for the sub score communication, ( $U = 263.0, p = .001$ ). But none of the other sub score measures, trust ( $U = 383.0, p = .112$ ), alienation ( $U = 466.5, p = .98$ ) were significantly different between boys and girls.

### **Correlational Analysis**

This section will report the results of the inferential analyses conducted to answer the research questions regarding peer relations with coping skills, peer attachment, empathy, and self-concept (see Table 2).



Table 2

*Correlation Table*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>1</b> Peer Acceptance	-															
<b>2</b> Peer Rejection	-.261*	-														
<b>3</b> social_supp_academic	0.113	0.022	-													
<b>4</b> social_supp_social	-.192*	0.018	.550*	-												
<b>5</b> self_rel_academic	0.033	0.077	.350*	.222*	-											
<b>6</b> self_rel_social	0.016	0.08	.398*	.510*	.519*	-										
<b>7</b> distancing_academic	0.015	0.015	0.047	.188*	0.073	0.149	-									
<b>8</b> distancing_social	.196*	0.06	0.024	0.163	0.054	0.069	.408*	-								
<b>9</b> Totalempathy	0.043	0.024	0.037	0.12	0.087	.239*	-.218*	-.310*	-							
<b>10</b> socialcompetence	0.01	0.162	0.031	0.012	0.052	0.029	-0.05	0.132	0.043	-						
<b>11</b> behaviourconduct	0.153	0.176	0.041	0.082	0.161	.206*	0.115	0.027	.236*	0.162	-					

<b>12</b>	globalselfworth	0.109	- 0.06	0.12	.186*	.198*	0.165	- 0.139	0.007	0.06 3	.305* *	.255* *	-			
<b>13</b>	Trust	0.107	- .198 *	- 0.014	0.127	.192*	.220*	0.031	0.135	0.02 6	0.098	0.12	0.09 5	-		
<b>14</b>	Communication	0.056	- .200 *	0.043	0.169	0.114	.217*	0.027	0.036	0.13 4	0.134	.284* *	0.13 9	.597* *	-	
<b>15</b>	Alienation	- 0.158	- 0.05	0.111	0.046	0.021	0.025	0.099	- 0.029	- 0.06 4	0.096	- 0.014	- 0.04 7	0.106	0.059	-
<b>16</b>	TotalIIPA	0.072	- .173 *	0.059	0.142	.204*	.276* *	0.001	0.098	0.05 7	0.155	.227*	0.13 3	.764* *	.697* *	.285* * -

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\* denotes significance at  $p < 0.05$ , \*\* denotes significance at  $p < 0.01$

## **Phase II- Interview data analysis**

This section will report the results of the descriptive statistics and inferential analyses conducted to answer the research questions regarding peer relations and ToM. (See Table 3)

### **Role of Gender and Age on ToM Abilities**

MANOVA was conducted to see the effect of age and gender on the two ToM tasks (Eyes test,  $M=19.98$ ,  $SD=1.48$ , SAS score,  $M=31.44$ ,  $SD=1.15$ ). The analysis found no significant interaction of age and gender with the two theory of mind tasks, Eye's test and the Total ToM score on the Socially Ambiguous stories test. There was, however, a trend towards significance for the two ToM test scores for age  $p=.062$ . When looking at between subject effects, significant age differences were seen for the SAS total score measure,  $F(1, 10)=96.67$ ,  $p<.05$ , partial  $\eta^2=.461$ .

Further analysis was conducted on the subscores from the SAS story test to look at the effect of age on the ToM subscores such as perspective taking, empathetic concern, person perception, and alternative thinking abilities. MANOVA was conducted with total word count used as a covariate and it was found to be not significant  $F(4, 8)=3.34$ ,  $p=0.07$ . Between subject effects found an effect of age on perspective taking score  $F(1, 11)=5.30$ ,  $p<.05$ , partial  $\eta^2=.325$ . Without total word count as a covariate, the interaction of ToM and age was significant, suggesting that the difference might be driven by children's language abilities.

### **Role of Gender and Age on ToM Abilities and Peer Relations**

MANOVA was conducted to see the effect of age and gender on the two ToM tasks (Eyes test,  $M=19.98$ ,  $SD=1.48$ , SAS score,  $M=31.44$ ,  $SD=1.15$ ) and peer relations. No significant differences were seen,  $p > .05$ .

Table 3

*Mean, Standard Deviations and Gender Effects of Peer Relation and ToM Measures*

Variables	Total N=14	Boys N=7	Girls N=7
Child's Eye Test	19.2 (4.1)	20.3 (3.9)	18.1 (4.3)
Peer Acceptance	17.8 (16.2)	17.5 (16.9)	18.1 (16.9)
Peer Rejection	28.2 (21.4)	30.1 (22.4)	26.3 (21.9)
Total score _story	30.8 (4.2)	31.9 (5.0)	29.7 (3.1)
Perspective Taking	12.4 (2.1)	12.9 (2.3)	11.9 (2.0)
Empathetic Concern	8.0 (1.6)	8.0 (1.7)	8.0 (1.6)
Person perception	3.4 (1.4)	4.0 (1.6)	2.7 (0.8)
Alternative thinking	1.6 (1.8)	1.7 (1.7)	1.4 (2.0)

### **Peer Relations and ToM Abilities**

To investigate the relationship between peer relations and ToM abilities, Pearson correlation was conducted separately for each of the peer relations measure, peer acceptance with Eyes Test, and total score on Socially Ambiguous stories, as well as Peer rejection with Eyes test and total score on SAS. No significant relationship was found between peer rejection and peer acceptance with Eyes Test or SAS score. Fisher's Z test was conducted to see if there were differences in the relationship of peer relations and ToM abilities between gender and age. The correlations were not significantly different showing that the peer relations and ToM abilities did not differ based on age or gender ( $p > .05$ ).

Pearson correlation was also conducted with peer acceptance and peer rejection score with the sub scores of the SAS stories. However, no significant relationship was found.

### **Qualitative Analysis**

The qualitative data from the interview portion of the study were analyzed using grounded thematic analysis (Braun & Clarke, 2006). Grounded thematic analysis involves reading through the responses and highlighting main points/codes. Additionally, chi-square tests were conducted to further analyze the differences in contents.

### **Social Understanding Stories**

The justification responses to the questions: Why do you think that Nancy/Margie are moving in the direction of the new girl?/Why do you think Kenny chose Tom to be on the team? were analyzed as to whether or not they referred to a) oneself or personal experience, b) directly to the story, or c) convention (e.g., "That usually happens at

school"). Frequency analyses showed that for both stories, the majority of the children responded by referring directly to the story (71.4% and 92.9 % for the Nancy/Margie and Kenny/Mark stories, respectively). Examples of responses that contained details directly from the story are: "Participant # 6 said, "because I read the story and they might want to be friends with her. The new girl sees the strange girls walk towards them", participant # 10 said, "by the way, Nancy and Margie sounded like in the story that they might want something from her." Responses that contained references to convention were mentioned by 14.3% of the children for the Nancy/Margie story and 7.1% of the children for the Kenny/Mark story. Examples of such responses are: participant # 3, "some people do that to get them jealous and then they turn out to be best friends. She has seen in schools before," and participant # 14, "he is usually last to be picked and could not always be picked. From prior knowledge and little bit from TV shows". Finally, none of the children referred to personal experience when answering this question for the Kenny/Mark story and 14.3% of children for the Nancy/Margie story. Example of personal responses are: participant # 2, "because it's hard for new kids to make friend, so they are trying to make her welcome. Maybe they are cool and so if they hang out with her, then other kids will also do that".

### **Emotional Valence of Social Story Responses**

For the current study, while the stories were ambiguous, students, in most cases, associated the situations to be either negative or positive. Some of the participants also mentioned bullying to describe the scenarios. To examine the emotional valence of the responses to the social story questions, the means of the proportions of positive, negative, and neutral responses for the individual stories and their total were explored. For the

Nancy/Margie story, 39.3 % of the answers were of neutral valence, 42.9% were of positive valence and 17.9% were of negative valence. For the Kenny/Mark story, 7.1% of the answers were neutral, 75% were positive, and 17.9% were negative. Overall, the students were more likely to answer the stories positively with 58.9% answering with positive valence, 23.2% had neutral answers, and 17.9% had negative answers.

Some of the negative answers included mention of being bullied. Participant #5 said, “They are bullies and new girl is their victim” when asked why Nancy smiled at Margie. Participant #11 said, “because she wanted to pick on the new girl”, participant #12, “because they are going over to bully”, participant #13, “I don’t know, because it was either that or they were going to bully her”.

Examples of the positive valence answers were: participant #7, “maybe they want to include her in their group”, participant #14, “maybe because she was interested or talk to her”, participant #6 “she was a cheerful person”. Examples of neutral responses were: participant #3, “because she wonders what they want”, participant #8, “because he is the last to be picked”, and participant #1 “Because just need an extra player. Cause Tom is one of the last to be chosen”.

Chi-square test was conducted to look at the effect of gender on the emotional valence of the answers. No significant difference was found between boys and girls in regards to emotional valence of the responses to the ambiguous story questions.

### **Summary of Findings**

This chapter explored the relationships between peer relations, ToM with coping skills, empathy levels, and self-concepts. While some of our hypotheses were not



confirmed, possibly due to low number in recruitment, we were still able to find some important findings.

In summary, the current study involved 70 children from grades 4, 5, and 7 of a semirural Catholic school board. Overall, we did find some significant differences in coping skills, attachment style, and self-concept measures between the peer accepted and peer rejected groups. We found a significant relationship between the types of coping skill used with peer acceptance group as they are more likely to use distancing as a coping skill when faced with a social problem as well as less likely to use social support when faced with social issues. We also found significant differences between peer accepted and peer rejected group of their usage of social support when facing social problems with peer accepted group less likely to use social support while peer rejected group more likely to use support. Similarly, peer accepted group was more likely to distance themselves when facing social problems compared to peer rejected group.

We did not see any significant correlation between the self-concept measures with peer relation groups

There were also significant correlations between peer attachment subscores with peer relations. It was found that there was a significant relationship between trust, communication, and total attachment score with peer rejection group. We also found significant difference for trust and communication techniques between the peer rejected and peer accepted groups. None of the other measure, empathy had any significant relationship with peer relations.

The study also explored the effect of age and gender on these measures. There were significant gender effects on empathy levels; coping skills subscore, social support and self-reliance technique.

Univariate analysis of variance showed effect of gender on peer relation measures and Mann-Whitney U test showed effect of gender on peer attachment measure.

The study was unable to show a relationship between peer relations and ToM, mostly due to the small sample size for the ToM tasks and lack of statistical power in the analysis. However, we were able to see age to have an effect on ToM abilities using qualitative approach.

## **CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS**

This chapter summarizes the findings of the different research questions based on the analyses conducted, and then discusses the results in the context of the current available literature. The purpose of the current study was to answer the research questions: (a) Investigate the relationship of peer relations and ToM, (b) Explore the relationship between peer relations with coping skills, empathy, peer attachment, and self-concept measures, and (c) Investigate the role of age and gender in these measures. The discussion aims to shed light on these research questions. The research is exploratory as the role of ToM in peer relations in school settings is an understudied topic and needs further investigation.

### **Discussion**

I will now discuss the main findings from the study in relation to the available literature.

#### **ToM and Peer Relations**

The first research question of the study was to look at the relationship between peer relations and ToM in children between the ages of 9-12 years old. Previous studies have shown that theory of mind scores were modestly but significantly correlated with children's social preference scores (Slaughter et al., 2002). However, the current study was unable to show such a relationship between peer relations and ToM. This might be because the ToM tasks were conducted in the interview phase and, as a result, did not have strong statistical power in the analysis due to the small sample size. However, to date, there is no clear consensus on whether and how ToM ability is related to peer acceptance in preschoolers and adolescence, though overall, the results of published

studies tend to suggest that popular or socially skilled children (Lalonde & Chandler, 1995; Slaughter et al., 2015) may be relatively advanced in their ToM understanding. Future research needs to investigate this relationship better.

### **Peer Relations and Its Relations with Coping Skills, Peer Attachment, Empathy, and Self-Concept**

The second research question was to look at the effect of peer relations on measures such as coping skills, peer attachment, empathy, and self-concept.

#### **Coping Skills and Peer Relations**

The current study was interested in looking at the different types of coping skills children use when exposed to social or academic stressors in a school setting. The study also wanted to see if there was a preference to use a certain type of coping skills by peer rejected children versus peer accepted children. Results from the study showed a significant positive relationship between children's peer acceptance ranking and using distancing as a coping mechanism for social stressors. This shows that children who are accepted by their peers are more likely to use distancing as a coping mechanism when they encounter social stressors.

The current study also found significant differences between peer acceptance groups versus peer rejected groups in their choice of using distancing and seeking social support as a coping skill when they face social stressors. The peer accepted group was more likely to use distancing and less likely to use social support as a coping mechanism compared to the peer rejection group when they encounter social stressors. This shows that there is a difference in children's preference to use different coping techniques due to their peer status in school. While these self-report measures may or may not reflect

children's actual coping strategies, they are important as they give insight into children's self-views.

Coping skills are generally categorized as either approach or avoidant type. According to Carver, Scheier, & Weintraub (1989), approach type coping strategy usually involves searching for more information in order to overcome the stressors. Typical approach type coping strategy involves talking to people, learning more about the problem and assessing the situation differently (Carver et al., 1989). On the contrary, avoidant type coping strategy involves distracting oneself from the stressors or deny the problem existing. In situations where individuals have some control over their experiences, an approach style typically leads to better outcomes than an avoidance style (Causey & Dubow, 1992). In regards to the findings from the current study, we found an increase use of distancing in the peer accepted group. Distancing is usually thought of as an avoidant type of coping mechanism.

Another way of categorizing coping skills is the differentiation of strategies that are primarily problem focused from those that are more emotion focused (Lazarus & Folkman, 1984). Problem-focused coping is usually defined to include strategies enacted in an attempt to modify or directly confront the stressful event, such as problem solving and direct action. This concept is similar to approach style coping skill. Emotion-focused coping is usually defined to include responses that serve the purpose of managing emotional reactions to stress, such as social withdrawal, distraction, and emotional venting. This is closely associated to avoidant style coping mechanism. Studies that examine the association of problem-focused and emotion-focused coping categories with psychopathology have considered a wide range of outcomes, most frequently, depression,

anxiety, loneliness, suicidal ideation, self-esteem, and positive well-being. A smaller number of studies have assessed additional outcomes, such as stress reduction, physiological reactions, or physical health. For the purpose of the current study, distancing is categorized as an emotion-focused coping strategy.

The results from the current study point towards peer accepted children to use more avoidance style and emotion-focused coping style. However, it is not clear why peer accepted children would prefer the avoidant style coping mechanism instead of the approach style mechanism. This finding is different from what was expected. While the current study was not intended to look at cause and effect relationship, possible reason could be that because they are popular among their friends, they consider the social stressor as an anomaly and avoid the problem altogether, whereas peer rejected children have fewer friends and address the social stressor to keep the friendship intact. Further research needs to be done to understand this difference better.

In regards to peer accepted children using more emotion-focused coping strategy compared to peer rejected children. Previous literature points to two general trends:

1. Problem-focused coping strategies are associated with fewer emotional and behavioral problems, and greater social competence, whereas emotion-focused coping is generally associated with more internalizing and externalizing symptoms.
2. These findings are not uniform across studies and generally depend on the type of stressor or features of the stressor (Losoya, Eisenberg, & Fabes, 1998).

Subsequent research confirms both of these trends. For example, in one recent study, the use of more problem-focused coping responses was correlated with fewer symptoms of

mental health disorders (Li, DiGiuseppe, & Froh, 2006), but other studies found no such associations (e.g., Horwitz, Hill, & King, 2011). Findings are slightly more consistent across studies of emotion-focused coping in that greater use of these strategies is correlated with elevated symptoms of mental health disorders (Horwitz et al., 2011; Rafnsson, Johnson, & Windle, 2006). While the findings from the current study is in contrast to previous studies, the difference in results point to the inconsistency in the literature with some showing peer status linking to the type of coping skills and others not finding any link. Additionally, some studies have found differences in strategies being used based on the situation the child is in rather than accounting for personal factors (Seiffge-Krenke, Aunola, & Nurmi, 2009). It also needs to be taken into account that different studies use different terms for classifying coping skills, a major criticism of the field (Skinner, Edge, Altman, & Sherwood, 2003). Future studies could try to find a consensus regarding the usage of the terms to find consistent results and would benefit the field.

### **Peer Attachment and Peer Relationship**

The current study was interested in looking at the relationship between peer relation and peer attachment styles. To answer this question, children filled out a peer attachment questionnaire that had a total peer attachment score as well as subscores that looked at communication, trust, and alienation scores. We found trust, communication and total attachment scores to be significantly negatively correlated with peer rejection scores. The trust scale from the IPPA (Armsden & Greenberg, 1987) measures the degree of mutual understanding and respect in the attachment relationship. The findings from the current study make sense as it is expected that people who are rejected by peers would

have a low level of trust in their relationships. The study did not find significant correlation of alienation with peer rejection scores. The study also did not find any significant relationship of peer attachment measures with peer acceptance scores. This might be due to the low reliability scores of the subscales from IPPA as mentioned by Armsden and Greenberg (1987).

The study also found significant correlation difference between peer acceptance scores and trust with peer rejection scores and trust. There was also significant difference in correlation between peer acceptance scores and communication and with peer rejection scores and communication. These findings are important as attachment relationships are thought to form the context in which children learn about and begin to understand emotional experiences and coping (Contreras et al., 2000). The ways in which caregivers and parents respond to children not only influences the type of attachment relationship they will have, but also how children will learn to regulate their emotions. During adolescence, the attachment with peers becomes relevant as young people start to develop close bonds with individuals external to their family system (Armsden & Greenberg, 1987; Cassidy & Shaver, 2008).

The current study found significant gender effect for the total attachment scores. This is consistent with previous findings as we were able to see that females scored higher than males. Previous studies have shown that boys and girls exhibit different behavioral patterns in their relationships, with boys stressing independence and girls emphasizing relatedness (Cross & Madson, 1997). Ma and Huebner (2008) stated that while majority of the research shows that parent attachment is stronger in girls, girls may also be more likely than boys to draw support from other sources, such as their peers. In



fact, Claes and Simard (1992) found that adolescent males and females had similar numbers of peer relationships, but females were more strongly connected with their peers.

The current study did not see any age difference. This is in line with the literature as there are no consistent findings available with peer attachment scores. Previous cross sectional studies examining correlations between peer attachment and age reported individuals of different ages have produced inconsistent findings, with some studies documenting positive relationships between age and attachment, some studies reporting a negative link (e.g., Elmore & Huebner, 2010; Ma & Huebner, 2008), and other studies reporting the lack of a significant association (e.g., Wong, 1998). More specifically, inconsistent results were found in each age group examined in the various studies: age range 8–15 years (Elmore & Huebner, 2010). The current study was investigating peer relations between the ages of 9-12 years old and lies in the range where inconsistent results were found. Future research needs to look at potential factors that affect peer relations and peer attachment to better understand the complexity involved.

### **Empathy and Peer Relations**

The current study investigated the relationship between empathy levels and peer relations in children aged 8-12 years old. The correlational analysis found no significant relationship between peer relations and empathy levels. This finding is in contrast to previous research by Oberle et al. (2010). The null effect might be due to the low sample size (100 versus 70 for the current study) and, thus, reduces the power of the statistical analysis.

Univariate analysis of variance was conducted to see whether there were any age

or gender effects on empathy. While we did not find any age effect with the current sample, we did see a gender effect, with girls scoring higher on the empathy scale compared to boys. This is in line with previous research showing girls to be more empathetic than boys (Eisenberg & Lennon, 1983; Van der Graff et al., 2014). Previous studies have also failed to show any age effect on empathy measures during adolescence (Van der Graff et al., 2014). One possible reason could be that adolescents' empathic concern showed no increase during mid-adolescence, a time when changes in affective processing takes place (Crone & Dahl, 2012). It could be that intense emotionality in response to others' distress lead to a self-focused reaction instead of empathic concern (Eisenberg et al., 1998). A second reason might be that we measured the tendency to experience feelings of concern in daily situations rather than the capacity to respond with empathic concern in situations requiring high-level perspective taking (see Eisenberg et al., 2005).

### **Effect of Age and Gender on the Measures**

The final research question was to look at the effect of age and gender on the different measures.

#### **Age and Gender Differences in Peer Relation**

One of the research questions in the study was to look at whether the peer relations status is affected by the age and gender. While the interaction between age and gender was not significant, analysis of variance conducted found that boys had higher peer rejection rankings compared to girls. This might be due to a number of factors. Previous studies have found empathy and social competence to play a factor in forming friendship in schools (Chow, Ruhl, & Buhrmester, 2013). This is consistent with findings

from our study where we saw higher empathy scores for girls compared to boys. This might account for why girls have lower peer rejection scores. However, the current study did not look at cause and effect of the variables, rather correlational relationship between measures. Future studies needs to look at other factors that affect peer relations in school.

### **Age and Gender Effect in TOM**

The current study found an effect of age on one of the ToM tasks, the SAS story task. We found that the older adolescent group had higher scores on the story task indicating higher levels of ToM abilities. Further analysis of the sub scores of the SAS found that an effect of age on perspective taking score, showing higher scores of perspective taking for older adolescent group compared to the younger group. This finding is consistent with previous research suggesting an increase in ToM abilities with increasing age (Bosacki, 2000, 2015). The current study was unable to find any gender effect in the ToM tasks. This is due to the low sample size of the interview phase of the study with only eight girls and six boys present in the sample.

### **Coping Skills and Age and Gender Effects.**

The current study also found significant gender differences for the sub scores of the coping skills measures, especially for social support for social problems and self-reliance techniques for social problems. Previous studies have found that girls tend to cope with stressors predominantly applying social support (Causey & Dubow, 1992; Hampel & Petermann, 2005). This is consistent with the current findings as we found girls to have scored higher on the social support coping skills when faced with both academic and social stressors. This finding also supports the assumption that girls tend to cope with stressors utilizing their social resources (Nolen-Hoeksema, 1991). Previous

studies have also found girls employing more emotional focused coping strategies. The current study did not see statistically significant differences between girls and boys for usage of emotional focused coping skills. This could partly be due to the usage of different questionnaires where Hampel and Petermann used a questionnaire that was specific to the strategies being used while the questionnaire used in the current study had only six subscales.

The current study did not find any age effect on the different coping skills subscales. Previous studies have been inconsistent with regards to age effects with some finding differences while others have not. Compas, Connor-Smith, Saltzman, Thomsen, and Wadsworth (2001) found age dependent increase in emotion focused coping (avoidance) among children and adolescents, ages 5 to 17 years. However, the only emotion focused measure in the study, distancing, did not find a significant difference. This could partly be because of the coping skill questionnaire measuring different outcomes. It could also be due to differences in culture, a limitation of the Hampel and Petermann (2005) study.

There are, however, inconsistencies in the literature regarding problem-focused coping skill development during adolescence. Some studies have found stability in problem solving during late childhood and adolescence, while others have found it to change over time (Hampel & Peterman, 2005). More research in this area is warranted as it has been shown previously that maladaptive coping style is a significant risk factor for the psychological development in children and adolescents (Compas et al., 2001).

### **Limitations**

The current research was meant to be exploratory in nature, and it is important to note the limitations of the research. The largest limitation of the study was the small sample size and heavily skewed data. We were unable to look at specific differences between the different forms of peer attachment with peer relation scores. We were also unable to look at ToM abilities with the other measures such as coping skills, peer attachment, empathy, and self-concept, as the ToM tasks were not conducted in the group testing session. With a larger sample size and incorporating the ToM tasks in the group testing session, we would have been able to look at the relationships between those measures.

The risk of Type I and Type II errors must also be acknowledged due to the small sample size. Due to the small sample size, we are faced with a higher risk of Type II errors; that is analyses may not have shown an effect when in reality there is one. Also the number of analyses conducted with such a small sample also increases the risk of Type I errors; that is, finding a result by chance when there is no real effect (Tabachnick & Fidell, 2013).

Another limitation in the study is the selection bias that arose due to the parents consenting for their child to participate in the study. In such situations where individuals select themselves into a group, it can cause a biased sample with nonprobability sampling.

Finally, the current data might not be generalizable with the entire population as all the respondents were from the same semirural neighborhoods in Southern Ontario. Caution should be made generalizing the findings with different population.

### **Implications for Research**

While the current research is exploratory, it has shed light on some important findings regarding peer relations, coping skills, peer attachment, and differences in empathy. The following section will elaborate on each of these findings.

### **Coping Skills**

We were able to find important differences in coping mechanisms used by children in their everyday school settings. Results from the current study showed girls to be using diverse coping skill techniques (e.g., self-reliance, problem solving, asking family or friends) compared to boys. The higher scores in the six coping skills measures that were used in the study support this conclusion. While significant differences were only seen for two of the measures, it still points out the need for boys to learn different coping techniques. This is important as teachers and parents can implement methods to teach boys different coping skills to handle problems associated with academics and social situations.

### **Peer Relations and Gender Effect**

The current study found gender differences in peer relations. We found that boys had higher peer rejection scores compared to girls. There was no statistical difference for peer acceptance scores. While the current study did not look at cause and effect relationship, it will be interesting in the future to understand the reason behind the difference. Possible reason for the difference could be due to low empathy levels in boys as well as low behaviour conduct scores. Further research in this area needs to look at other factors that can affect peer relationships formed in school setting.

### **Empathy and Gender Effect**

The current study also found differences in empathy measures between boys and girls. This is important as previous research has shown that empathy plays an important role in forming friendship, social competence, prosocial (Findlay, Girardi, & Coplan, 2006) and moral development (Hoffman, 2008), which show the importance of implementing perspective taking and empathetic skills in the curriculum to teach boys to be more empathetic.

### **Future Research**

ToM abilities in middle-aged children is an understudied area of research in developmental psychology. The purpose of the current study was to explore some of these understudied concepts and address the gap present in the literature.

The current study was interested in looking at advanced ToM and peer relations in adolescents between the ages of 9-12 years old. However, due to low sample size and some methodological challenges, the study was not able to find any significant association between advance ToM and peer relations. A future well-designed study with larger sample size can address this important question. Slaughter et al. (2015) in their meta-analysis of peer relations and ToM abilities found a small but significant effect. The magnitude of the effect of children's ToM understanding accounted for about 3.6% of the variance in peer popularity. While the results are promising, it shows that there are other factors that need to be looked at. Future research needs to look at other factors, such as physical, personality, cognitive, and behavioral factors, that can be associated with children's sociometric and perceived popularity.

Slaughter et al.'s (2015) meta-analysis also pointed to the importance of studying individual differences in ToM development using longitudinal studies at different time

points in a child's development. Fink et al. (2014) looked at the effect of ToM and peer relationships in children who are about to transition into a school setting. Future research could also look at the effect of ToM in teens transitioning to high schools and university as well.

Another avenue of research could be looking at self-concept measures and ToM abilities of children of different cultures. This would be expanding Bosacki & Astington (1999) findings where she found significant correlations between self-concept and ToM in the middle-aged children. It would be interesting to see the effect of culture and how that affects ToM abilities as Canada is a very multicultural country with people emigrating from countries across the world.

While sequential development of ToM abilities has been studied in normally developing children, it is also important to study ToM in clinical populations such as children. Peterson, Wellman, and Slaughter (2012) speak to this important avenue of research and expanded on developing scales to measure ToM in children who have Autism Spectrum Disorder, or children who are deaf. Future research also needs to investigate the effect of ToM and peer relations in clinical populations such as children with Attention Deficit Hyperactivity Disorder and Autism Spectrum Disorder.

One of the significant finding from the current study was the differences seen between peer accepted and peer rejected adolescents in their choice of coping skills. While this study was an exploratory study and did not look extensively at coping skills measure, it was still able to find differences. Future research could also look at personality types and coping skills to see if certain personality traits are linked to specific coping strategies being used. Based on literature searches conducted on coping skills, it



was evident the lack of consensus regarding usage of coping skills terms. Meta-analysis needs to be conducted to look at past research and come to consensus with the usage of terms to make the evidence more concrete.

While the current study was unable to collect data from teachers due to time limitation, future studies can look at the differences in self-report and teacher report of peer relations in middle school children. It would also be interesting to see whether there are differences between self-report and teacher's perception of the peer status. Furthermore, studies can investigate the factors that can explain the differences. Teachers can also act as mediators in conflict resolution and encourage prosocial behaviour in the classroom (Spivak, 2016)

Lastly, the purpose of the current study was to expand on Bandura's social cognitive theory (2001). While we were not able to show relationship in some of the measures, we were able to show the effect of attachment styles on peer relationship. We were also able to show effect of coping skills as a result of peer relationships formed in school environment. Future research needs to look at other factors to elaborate on the socioemotional learning that takes place in the school context for adolescents.

### **Educational Implications/Significance**

The findings from the present study have some important educational implications. In general, this study may assist educators in devising new teaching methodologies and curriculum that are specifically focused on the preadolescent. Results from the present study suggest that social cognitions play an important role in the lives of preadolescents.

The findings from the study reiterate the importance of holistic education, in the

curriculum, where the whole child, their identity, meaning and purpose of life are considered instead of just subject matters.

Socio Emotional Learning (SEL) is one type of program that can be implemented in the schools. Research has found good empirical evidence supporting the implementation of school-based SEL programs. Studies have found that SEL programs to be effective in reducing emotional and behavioral problems and enhancing children's social and emotional competence, as well as showing a strong corollary impact on academic achievement (Zins, Bloodworth, Weissberg, & Walberg, 2004). Merrell, Juskelis, Tran, and Buchananl (2008) pilot tested a SEL program called Strong kids and Strong Teens. The pilot study found that social-emotional knowledge and negative emotional symptoms of participants following participation in the respective programs, students evidenced statistically significant and clinically meaningful changes in desired directions on the target variables.

The current study found differences in empathy levels between boys and girls. Roots of Empathy is an important skills training that can be implemented in the curriculum. This program not just focuses on empathy training, but an overall socioemotional development of students as a whole child.

The current study also found important differences in coping skills used by students when faced with academic and social stressors. Coping skills training programs can be implemented for students who are having a difficult time adjusting to the school. While studies have evaluated coping skills training programs in adolescents for clinical populations, such as Youth with Type I Diabetes (Whittemore et al., 2012) or Youth Suffering from Asthma (Srof, Velsor-Friedrich, & Penckofer, 2012), literature is deficient

when it comes to everyday stressors. A recent pilot study by Shapiro, Heath and Carsley (2015) was conducted to train youth with coping skills for everyday academic stressors. The study reported the feasibility and acceptability of StressOFF Strategies, a single-session (45 min.) adolescent-targeted, school-based psychoeducational program, which introduces cognitive behavioral techniques and mindfulness-based techniques. The pilot study found that 88.67% of participants rated the program as good to excellent with over 87% of participants reporting understanding strategies quite well to very well, and 76–87% of participants indicating high levels of willingness to use each strategy. Female students reported high levels of stress, greater satisfaction with the program, and better understanding and willingness to use strategies. Implications for schools are discussed. This is important as effective coping skill trainings can be implemented in the curriculum for children to handle everyday academic stressors. Prolong exposure to stress can lead to adverse psychological symptoms. It is important to implement methods towards prevention of mental health problems in schools rather than take a care approach. Future research needs to look at the effectiveness of implementing such training programs in the curriculum.

Mindfulness training is another approach that has been tried in many school boards. Mental Health Foundation Report (2010) called *Mindfulness - A way of paying attention*. Generally, it means bringing conscious awareness to the present experience without making judgements about it. Few published studies have examined the use of mindfulness training in a normal adolescent sample. The study by Huppert and Johnson (2010) showed that a short, modified form of Mindfulness-Based Stress Reduction (MBSR) is well-accepted by adolescents and found some evidence of improvement in

their well-being. Sixty-nine percent of the students in their mindfulness group reported that they had enjoyed learning about mindfulness, and 74% thought they would continue with the mindfulness practice.

While the study was unable to find a relationship between ToM and peer relations due to methodological limitations, the importance of ToM should not be ignored. Most ToM training programs in schools and community direct their resources to children with ASD. However, the current study has shown differences in ToM ability in healthy boys and girls. ToM needs to be incorporated in the curriculum and future research in their effectiveness needs to be looked at.

### **Personal Reflections Summary**

The process of completing an MRP from start to finish has been a great learning experience. While it had been challenging at times, I did not give up. This process has provided me with knowledge about socioemotional development in children, and about myself and where I would like to focus my career in the future.

I started the Master of Education program being very excited about the prospect of learning about the education system and about developmental changes in children. But soon enough, I realized that I did not belong in this program. I was not a teacher and did not understand the education system well. This put me at a disadvantage as I was interested in conducting research and understanding socioemotional development of children in schools. My lack of knowledge about the education system often made it difficult for me to excel in my courses as well as with research. However, I was lucky enough to get accepted into a school board and actually finish my project while not being affiliated with any school board. Being a part time student in the program also affected

my progress, often having multiple things to juggle, M.Ed., full-time work, and a research project.

In regards to my experience as a researcher, I was able to understand the highs and lows of the process. While I have been involved in conducting research for a few years before my M.Ed., I was still not prepared for the process. There was a steep learning curve for me to understand the topic of socioemotional development in children. Even after conducting extensive literature review, I missed some important aspects in designing my research project. I also had trouble focusing on key research questions and often became distracted. The hardest part of the research process was analyzing the data and writing up the project. I often felt that I lacked expertise in fully understanding the data and analyzing them properly in order to make appropriate research claims.

There were some positives that I took from this experience. I enjoyed my time interacting with the children, talking to them, and conducting interviews with them to learn more about their thinking process. I enjoyed my interaction with the teachers as well as the principals from the different schools who were very encouraging. Lastly, I have learned how to be a humble researcher. Even with previous research experience, I have realized that there is always room for improvement and learning that can take place.

Overall, I have learned that I enjoy working with children and interacting with them. My experience in the M.Ed. program has encouraged me to stay connected with the educational system in a more applied role as I embark on a path to pursue school psychology. My passion for learning has taken me through a diverse academic pathway. I may not know where my academic career will take me in the future, but I always

remind myself about John Dewey's (1986) quote "Education is not preparation for life; education is life itself" (p 241-252).

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## Appendix A

## Questionnaire

## Hartners's Self Perception Profile for Adolescents

	Really True for me	Sort of True for me	Sample Sentence		Sort of True for me	Really True for me
a.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids would rather play outdoors in their spare time	BUT	Other kids would rather watch T.V.	<input type="checkbox"/>
1.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids feel that they are very good at their school work	BUT	Other kids worry about whether they can do the school work assigned to them	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids find it hard to make friends	BUT	Other kids find it pretty easy to make friends	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids do very well at all kinds of sports	BUT	Other kids don't feel that they are very good when it comes to sports	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are happy with the way they look	BUT	Other kids are <i>not</i> happy with the way they look	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids often do not like the way they behave	BUT	Other kids usually like the way they behave	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are often unhappy with themselves	BUT	Other kids are pretty pleased with themselves	<input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids feel like they are just as smart as other kids their age	BUT	Other kids aren't so sure and wonder if they are as smart	<input type="checkbox"/>
8.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids know how to make classmates like them	BUT	Other kids don't know how to make classmates like them	<input type="checkbox"/>
9.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish they could be a lot better at sports	BUT	Other kids feel they are good enough at sports	<input type="checkbox"/>
10.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are happy with their height and weight	BUT	Other kids wish their height or weight were different	<input type="checkbox"/>
11.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids usually do the right thing	BUT	Other kids often don't do the right thing	<input type="checkbox"/>

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
12.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't like the way they are leading their life	BUT	Other kids <i>do</i> like the way they are leading their life	<input type="checkbox"/>	<input type="checkbox"/>
13.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are pretty slow in finishing their school work	BUT	Other kids can do their school work quickly	<input type="checkbox"/>	<input type="checkbox"/>
14.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't have the social skills to make friends	BUT	Other kids <i>do</i> have the social skills to make friends	<input type="checkbox"/>	<input type="checkbox"/>
15.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think they could do well at just about any new sports activity they haven't tried before	BUT	Other kids are afraid they might not do well at sports they haven't ever tried	<input type="checkbox"/>	<input type="checkbox"/>
16.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish their body was different	BUT	Other kids like their body the way it is	<input type="checkbox"/>	<input type="checkbox"/>
17.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids usually act the way they know they are supposed to	BUT	Other kids often don't act the way they are supposed to	<input type="checkbox"/>	<input type="checkbox"/>
18.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are happy with themselves as a person	BUT	Other kids are often not happy with themselves	<input type="checkbox"/>	<input type="checkbox"/>
19.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids often forget what they learn	BUT	Other kids can remember things easily	<input type="checkbox"/>	<input type="checkbox"/>
20.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids understand how to get peers to accept them	BUT	Other kids don't understand how to get peers to accept them	<input type="checkbox"/>	<input type="checkbox"/>
21.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids feel that they are better than others their age at sports	BUT	Other kids don't feel they can play as well	<input type="checkbox"/>	<input type="checkbox"/>
22.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish their physical appearance (how they look) was different	BUT	Other kids like their physical appearance the way it is	<input type="checkbox"/>	<input type="checkbox"/>
23.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids usually get in trouble because of things they do	BUT	Other kids usually don't do things that get them in trouble	<input type="checkbox"/>	<input type="checkbox"/>
24.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids like the kind of person they are	BUT	Other kids often wish they were someone else	<input type="checkbox"/>	<input type="checkbox"/>

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
25.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids do very well at their classwork	BUT	Other kids don't do very well at their classwork	<input type="checkbox"/>	<input type="checkbox"/>
26.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish they knew how to make more friends	BUT	Other kids know how to make as many friends as they want	<input type="checkbox"/>	<input type="checkbox"/>
27.	<input type="checkbox"/>	<input type="checkbox"/>	In games and sports some kids usually watch instead of play	BUT	Other kids usually play rather than just watch	<input type="checkbox"/>	<input type="checkbox"/>
28.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish something about their face or hair looked different	BUT	Other kids like their face and hair the way they are	<input type="checkbox"/>	<input type="checkbox"/>
29.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids do things they know they shouldn't do	BUT	Other kids hardly ever do things they know they shouldn't do	<input type="checkbox"/>	<input type="checkbox"/>
30.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are very happy being the way they are	BUT	Other kids wish they were different	<input type="checkbox"/>	<input type="checkbox"/>
31.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids have trouble figuring out the answers in school	BUT	Other kids almost always can figure out the answers	<input type="checkbox"/>	<input type="checkbox"/>
32.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids know how to become popular	BUT	Other kids do not know how to become popular	<input type="checkbox"/>	<input type="checkbox"/>
33.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't do well at new outdoor games	BUT	Other kids are good at new games right away	<input type="checkbox"/>	<input type="checkbox"/>
34.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think that they are good looking	BUT	Other kids think that they are not very good looking	<input type="checkbox"/>	<input type="checkbox"/>
35.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids behave themselves very well	BUT	Other kids often find it hard to behave themselves	<input type="checkbox"/>	<input type="checkbox"/>
36.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are not very happy with the way they do a lot of things	BUT	Other kids think the way they do things is fine	<input type="checkbox"/>	<input type="checkbox"/>

**Parent and Peer Attachment (IPPA)-Peer attachment only**

Response categories:

- 1) Almost never or never true, 2) Not very true, 3) Sometimes true, 4) Often true, 5) Almost always or always true

The next set of questions asks you about your relationship with your close friends.

1. I like to get my friends' point of view on things I'm concerned about
2. My friends can tell when I'm upset about something
3. When we discuss things, my friends care about my point of view
4. When I discuss things, my friends care about my point of view
5. I wish I had different friends
6. My friends understand me
7. My friends help me to talk about my difficulties
8. My friends accept me as I am
9. I feel the need to be in touch with my friends more often
10. My friends don't understand what I'm going through these days
11. I feel alone or apart when I'm with my friends
12. My friends listen to what I have to say
13. I feel my friends are good friends
14. My friends are fairly easy to talk to
15. When I am angry about something, my friends try to be understanding
16. My friends help me to understand myself better
17. My friends care about how I am
18. I feel angry with my friends

19. I can count on my friends when I need to get something off my chest
20. I trust my friends
21. My friends respect my feelings
22. I get upset a lot more than my friends know about
23. It seems as if my friends are irritated with me for no reason
24. I can tell my friends about my problems and troubles
25. If my friends know something is bothering me, they ask me about it

### **Empathy measures (Davis, 1983)**

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page.

DOES NOT DESCRIBES----- DESCRIBE ME VERY ME WELL

1. I often have tender, concerned feelings for people less fortunate than me. (EC)
2. Sometimes I don't feel very sorry for other people when they are having problems. (EC)
3. When I see someone being taken advantage of, I feel kind of protective towards them. (EC)
4. Other people's misfortunes do not usually disturb me a great deal. (EC) (-)
5. When I see someone being treated unfairly, I sometimes don't feel very much pity for them. (EC) (-)
6. I am often quite touched by things that I see happen. (EC)
7. I would describe myself as a pretty soft-hearted person. (EC)

### **Coping styles (Rose & Rudolf, 2006):**

<b>Part 1-When I get a bad grade in school – one worse than I normally get – I usually . . .</b>
Answer options: 1 – Never 2 – Not very often 3 – Sometimes 4 – Quite often 5 – Always
1. Tell a friend or family member what happened.



2. Try to think of different ways to solve it.
3. Make believe nothing happened.
4. Talk to somebody about how it made me feel.
5. Change something so things will work out.
6. Forget the whole thing.
7. Get help from a friend.
8. Decide on one way to deal with the problem and do it.
9. Tell myself it doesn't matter.
10. Ask a friend for advice.
11. Do something to make up for it.
12. Refuse to think about it.
13. Ask a family member for advice.
14. Know there are things I can do to make it better.
15. Do something to take my mind off it.
16. Ask someone who has had this problem what he or she would do.
17. Go over in my mind what to do or say.
18. Say I don't care.
19. Get help from a family member.
20. Try to understand why this happened to me.
21. Talk to the teacher about it.
22. Try extra hard to keep this from happening again.

<b>Part 2- When I don't get along with a friend, I usually . . .</b>
Answer options: 1 – Never 2 – Not very often 3 – Sometimes 4 – Quite often 5 – Always
1. Tell a friend or family member what happened.
2. Try to think of different ways to solve it.
3. Make believe nothing happened.
4. Talk to somebody about how it made me feel.
5. Change something so things will work out.
6. Forget the whole thing.
7. Get help from a friend.
8. Decide on one way to deal with the problem and do it.
9. Tell myself it doesn't matter.
10. Ask a friend for advice.
11. Do something to make up for it.
12. Refuse to think about it.
13. Ask a family member for advice.
14. Know there are things I can do to make it better.
15. Do something to take my mind off it.
16. Ask someone who has had this problem what he or she would do.

17. Go over in my mind what to do or say.
18. Say I don't care.
19. Get help from a family member.
20. Try to understand why this happened to me.
21. Talk to the teacher about it.
22. Try extra hard to keep this from happening again.

## **Loneliness and Dissatisfaction Questionnaire**

### **How I Feel**

1. It's easy for me to make new friends at school.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

2. I like to read.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

3. I have nobody to talk to.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

4. I am good at working with other children.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

5. I watch TV a lot.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

6. It's hard for me to make friends.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

7. I like school.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

8. I have lots of friends.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

9. I feel alone.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

10. I can find a friend when I need one.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

11. I play sports a lot.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

12. It's hard to get other kids to like me.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

13. I like science.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

14. I don't have anyone to play with.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

15. I like music.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

16. I get along with other kids.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

17. I feel left out of things.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

18. There's nobody I can go to when I need help.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

19. I like to paint and draw.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

20. I don't get along with other children.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

21. I'm lonely

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

22. I am well-liked by kids in my class.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

23. I like playing board games a lot.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

24. I don't have any friends.

- ☐ Always True
- ☐ True Most of the Time
- ☐ True Sometimes
- ☐ Hardly Ever True
- ☐ Not True at All

### **Interview Questions (Bosacki, 1998; 2000)**

#### **Vignette 1: Nancy/Margie**

Nancy and Margie are watching the children in the playground. Without saying a word, Nancy nudges Margie and looks across the playground at the new girl swinging on the swing set. Then Nancy looks back at Margie and smiles. Margie nods, and the two of them start off toward the girl at the swingset. The new girl sees the strange girl walk towards her.

She'd seen them nudging and smiling at each other. Although they are in her class, she has never spoken to them before. The new girl wonders what they could want.

#### **Vignette 2: Kenny/Mark**

Kenny and Mark are co-captains of the soccer team. They have one person left to choose for the team. Without saying a word, Mark winks at Kenny and looks at Tom who is one of the last children left to be chosen.

Mark looks back at Kenny and smiles. Kenny nods and chooses Tom to be on their team. Tom sees Mark and Kenny winking and smiling at each other. Tom, who is usually one of the last to be picked for team sports, wonders why Kenny wants him to be on his team. The researcher will measure the frequencies of the Yes/No answers to the close ended questions and measure the numbers of children producing each of the different types of comment during the two ToM tasks.

### **Interview Questions**

#### **Close-ended**

1. Does the new girl see Nancy and Margie nudging and smiling at each other? Yes  
/No



2. Has the new girl ever spoken to Nancy and Margie before? Yes/No

Open Ended Questions

1. Why did Nancy smile at Margie?
2. Why did Margie nod?
3. Why did Nancy and Margie move off together in the direction of the new girl?
4. Why do you think this? How do you know?
5. Does the new girl have any idea of why Nancy and Margie walking towards her?

Yes/No

6. How do you know that the new girl has/Doesn't have any idea of why Nancy and Margie walking towards her?
7. How do you think the new girl feels?
8. Why? Does she feel anything else? Why?
9. Choose a character in the story and describe her
10. What kind of things can you think of to describe her? What kind of person do you think she is?
11. Is there another way that you can think about this story? Yes/No
12. If so, how?

## **Appendix B**

### **Resources for Students**

**Following are list of books that can be used in the school for youth to learn about emotional health and peer relations in the classroom**

#### **Book for Students**

- 11 Birthdays by Wendy Mass, Scholastic Corporation, 2009
- Counting by 7s by Holly Goldberg Sloan, Dial Books, 2013
- The Secret Garden by Frances Hodgson Burnett, Children's Classics, 1991
- Saving Francesca by Melina Marchetta, Knopf books for young readers, 2003
- Hound Dog True by Linda Urban, Harcourt Children's Books, 2011
- Pie by Sarah Weeks, Scholastic Press, 2011
- The Fingertips of Duncan Dorfman by Meg Wolitzer, Dutton Books for Young Readers, 2011
- A weekend with Wendell by Kevin Henkes, Greenwillow Books, 1995
- Mr Peabody's Apple by Madonna Long, Callaway Editions, 2003
- Understanding Myself: A Kid's Guide to Intense Emotions and Strong Feeling by Mary Lamia, Magination Press, 2010
- What to do when you are scared and worried: A guide for kids by James Crist, Free Spirit Publishing, 2004
- Fighting invisible Tigers: Stress Management for Teens by Earl Hipp, Free Spirit Publishing, 1995
- How to take the Grrr out of Anger by Elizabeth Verdick & Marjorie Lisovskis, Free Spirit Publishing, 2002

- Chicken Soup for the Teenage Soul: stories of life, love and learning by Jack Canfield, Mark Hansen & Kimberly Kirberger, Chicken Soup for the soul, 1997
- Quiet Power: The Secret strengths of Introverts by Susan Cain, Dial books, 2016
- Toot and Puddle: You are my sunshine by Holly Hobbie, Brown Young Readers, 2007
- Days with Frog and Toad by Arnold Lobel, HarperCollins, 2004
- Growing up with a Bucket full of happiness: Three rules of a happier life by Carol McCloud, Bucket Fillers, 2010
- Inside out: Driven by Emotions by Elise Allen, Disney Press, 2015

## **Appendix C**

### **Resources for Parents and Teachers**

#### **Books**

- Challenging kids, Challenged Teachers by Leslie Packer & Sheryl Pruitt, Woodbine House, 2010
- Chasing Hope: Navigating the world of special needs child by Christine Walker, Writers of the Round table press, 2014
- The Teachers's guide to student Mental Health by William Dikel, W.W. Norton & Company, 2014
- How to Talk So Kids Will Listen & Listen So Kids Will Talk by Adele Faber & Elaine Mazlich, Collins Living, 1999
- Safe Teen: Powerful Alternatives to Violence by Anita Roberts, Polestar Book Publishers, 2001.
- Bullies Are a Pain in the Brain by Trevor Romain, Free Spirit Publishing, 1997.
- How Parents Can Take Action Against Bullying by CindiSeddon, Bully B'ware Productions, 1997.
- Cyberbullying: Bullying in the digital age by Robin Kowalski. Wiley-Blackwell Press, 2007.
- Cyberbullying and cyberthreats by Nancy Willard, Research Press, 2007.
- The Bully in the Book and in the Classroom by C. J. Bott, Scarecrow Press, 2004.

#### **Socio-Emotional Learning programs**

- Durlak, J. A., & Weissberg, R. P. (2007). Full Report: The impact of after-school programs that promote personal and social skills. Chicago, IL: Collaborative for Academic, Social, and Emotional Learning.
- Collaborative for Academic, Social, and Emotional Learning (CASEL) - this is organization based in United States involved in advancing the development of academic, social and emotional competence for all students. The organization is involved in providing evidence-based social and emotional learning (SEL) in schools. The program wants to include SEL as an integral part of education from preschool through high school. **Website-** <http://www.casel.org/>
- Center on the Social and Emotional Foundations for Early Learning:  
<http://csefel.vanderbilt.edu/briefs/wwb8.pdf>
- Promoting Peer Interaction Skills- This is a report that provides information on how to promote peer relations in schools.  
<https://www.naeyc.org/files/yc/file/201001/OstroskyWeb0110.pdf>
- Heart and mind online is a website that provides resources for promoting emotional wellbeing for children. **Website:**<http://heartmindonline.org/>
- Wits Program: **This program provides** support programs for children to prevent violence and promote healthy relationships for all children, adolescents and youth. **Website:**<http://witsprogram.ca/>

### **Coping Skills training programs**

- Teen Stress in Schools: This article talks about a 45 minute stress management program called StressOFF Strategies program. The program has four components such as coping skills training, psycho-education, decreasing stigma

and also provides opportunity for followup. **Website**<http://www.cea-ace.ca/education-canada/article/teen-stress-our-schools>

- Mindfulness training: this is a pilot study looking at the impact of mindfulness training in schools for wellbeing. **Website**<https://mindfulnessinschools.org/wp-content/uploads/2013/03/Mindfulness-in-schools-pilot-study-2008.pdf>
- Big Brother Big Sister is a peer mentorship program. This program allows young adolescents to be paired with an older youth. The program matches the adolescent with someone who shares common interest and can form life long relationship. **Website**<http://www.bbbst.com/en/Home/default.aspx>
- Strong Teen and Strong Child-this is a program planned to be implemented in the curriculum to teach children about social and emotional skills, and increasing coping skills of high school students, those in grades 9-12. **Website**<http://strongkids.uoregon.edu/strongteens.html>
- SNAP for School: This is a school based program delivered to students between the ages of 6-11. The program focuses on developing social skills for children struggling with behaviour issues and teaching them effective emotional regulation, self-control and problem-solving skills. It is a 13-week in-class program covers topics such as managing anger, handling group/peer pressure and dealing with bullying. <http://www.childdevelop.ca/programs/snap/snap-programs>
- ACT & ADAPT program: It is a school based group program designed for students in grades five to eight who are experiencing challenges managing their mood. The 20-week program includes children meeting weekly in small groups during class time to discuss topics such as solving problems, making time for fun,

and identifying and changing negative thoughts. **Website:**

<http://www.childdevelop.ca/programs/early-intervention-services/school-based-programs#snap>

- FRIENDS for Life: It is also a school based program. It is a 10-week program for children ages 6-11 years. The program can be run either in small groups or within the whole classroom. The program covers topics such as self-esteem, problem-solving and self-expression. The aim of the program is to help students learn skills to cope with stress and to build emotional resilience. **Website:**

<http://www.childdevelop.ca/programs/early-intervention-services/school-based-programs#snap>

### Community Resources

- Kids help phone: This is a phone line that provides counseling for kids under the age of 20 via telephone. **Website:**
- Canadian Mental Health Association (CMHA): CMHA is a volunteer organization involved in developing and promoting mental health policies in Canada. They also provide support for people experiencing mental illness. Website:
- Kids Mental Health Canada also called Children's Mental Health Ontario (CMHO) is an organization that works to identify and develop solutions to important policy regarding children's mental health sector. They have resources for both parents and professionals who are dealing with mental health issues.

**Website**<http://www.kidsmentalhealth.ca/>

- PREVNet: It is an umbrella network of 122 leading Canadian research scientists and 62 national youth-serving organizations. They are working together to stop bullying in Canada. **Website:** <http://www.prevnet.ca/resources/healthy-relationships-tool>